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MARCH 1985

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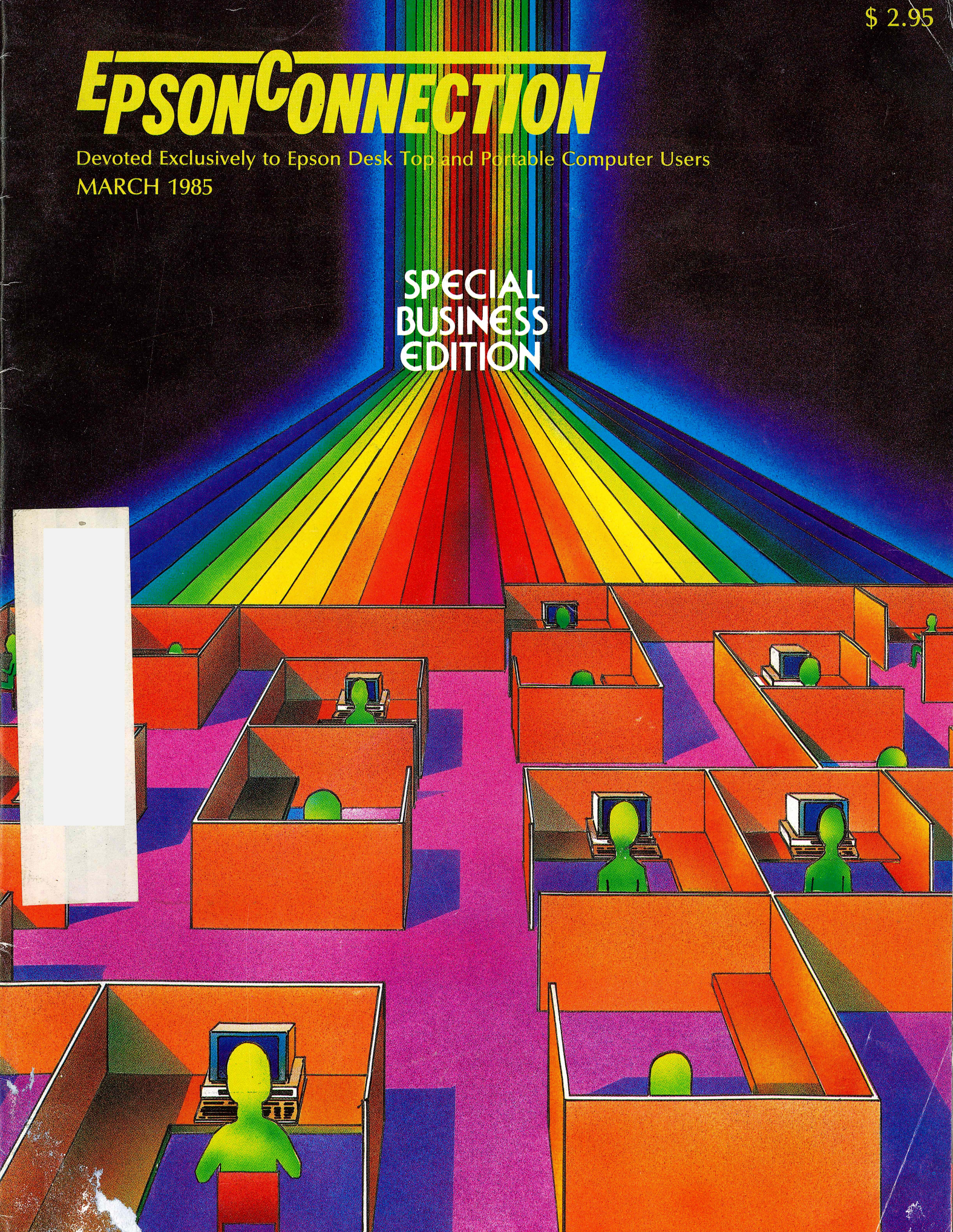

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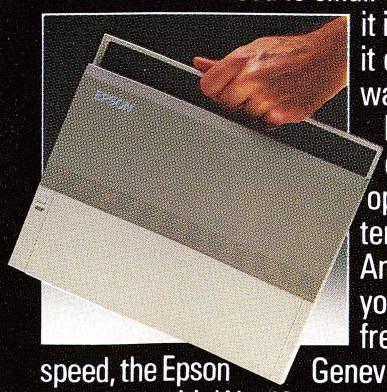

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EPSONCONNECTION

MARCH 1985

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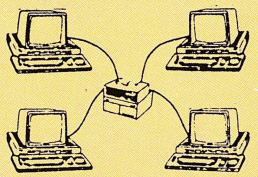

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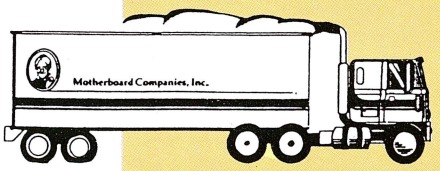

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Editorial

Epson has received a great deal of press coverage during the month of February. *Popular Computing* (Feb 1985) featured the QX-16 on the front cover with an article entitled, "The Rising Star of Epson", by Jonathan Sacks. *Byte* magazine (Feb 1985) had a review of the Epson Geneva PX-8, and a discussion of Valdocs by Jerry Pournelle in his Chaos Manor column. *Consumer Reports* (Feb 1985) featured a report on the Epson QX-10, and compared it to the Apple Macintosh and IBM-PC.

We received numerous letters, phone calls, and messages on our bulletin board network from users upset by the nature of some of this media coverage.

Dale Chodorow, President of the Epson North Metro Users Group in New York published a "State of the Club Address" in their ENMUG newsletter. In his address he raises the question "What is our future?"

The reviews of the QX-10 have been critical, and the reviews of the PX-8 positive. Reviews of the QX-16 are premature yet, since the final production model and software has not been available. The released version of the QX-16 will include 512K RAM memory as a standard feature, along with a quad density disk drive. Most of the criticism is aimed at the software problems experienced with Valdocs in respect to bugs, and lack of speed. This criticism is not entirely unfounded, and in light of the delays experienced with the release of Valdocs 2, has created frustration.

Several articles pointed out that with integrated software now available for the 16 bit environment, Valdocs no longer has a unique corner on the market. This is true; however, take a good look at these other packages. Framework has a very nice tutorial, it only took me three hours to go through enough to get started (Do you remember how long it took you to get started using your Epson; 5 minutes). My experience with the editor was that I found it limited when compared to Valdocs, and slower than WordStar. The editor in the Apple Macintosh™ is limited to 8 page documents. To go beyond 8 pages you have to purchase the 512K FatMac™ or wait for a new disk-based program. Other integrated packages do not have the extensive wordprocessing features with the ease of use experienced in Valdocs.

It is interesting to note that criticism of the hardware is virtually non-existent. The engineering, graphics capabilities, and quality of the Epson products has been excellent. Few computer companies offer a 12 month warranty on their products, and Epson was the first. *How many computers or printers survive floods or being dropped?*

How do owners of the QX-10 feel?

We should have a much better feel for this in the next few months. We encourage you to fill out the reader response cards included in the February issue if you have not done so. I for one am not sorry about the decision to purchase the QX-10, nor the other 7 in constant use in our offices and home. The purpose of my original purchase was to buy a computer I could relate to. I didn't want to stare at an A>, and have to read hundreds of pages of poorly written manuals to be able to use a computer. I have experienced only one shortcoming in software availability for my QX-10. There is virtually no educational software on the market for CP/M based computers. This is a serious flaw in the broader CP/M market, although when you think about having to fight the kids away from your computer, perhaps it's not all that detrimental.

What about Valdocs?

The concept is terrific, and I know hundreds, perhaps thousands of users who are experiencing few if any problems using it. I have not been using the editor, I personally found that WordStar by MicroPro and Word by MicroSoft were more reliable during the numerous Valdocs updates, and operations were quicker. However, Valdocs has a lot of other features which are great to use. The ease of use of the Valdocs Mail, Indexing features and Draw have been blessings in disguise. It is because of this integration and simplicity that I have continued to patiently wait for 2.0. The TPM environment is more powerful than the CP/M system. As a tester of Valdocs 2.0 I will only say that the improvements are tremendous, and I eagerly look forward to the formal release version. The wait has not limited our use in any fashion. The QX-10 now has a tremendous list of available software for any use imaginable, including the MSDOS world with the use of the Titan board.

I feel strongly that an "integrated" package should include the ability to do mailmerge and bring graphs or spreadsheet data into the editor. A cardfile is important, but without the ability to use it as needed in a document, one might as well dust off the typewriter.

What about 2.0?

I personally feel the update should be free to all owners. I feel the wait has been too long. From a business point of view, I know that $49 is extremely reasonable; two (or three) disks and a nicely bound Epson manual is more than worth it. The mistake was dangling the carrot over a year ago. The promises were made, "It will be available in June", "It is promised for the fall selling

Continued on following page

Epson InterAct

1985

The national Epson Users Conference coordinated and planned by Epson America is tentatively scheduled for April 27th 1985. Workshops, Questions & Answer seminar, Valdocs 2.0, hands-on help, and much more will be packed into this full day conference. For more information call:

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or send in the card included in this issue.

Continued from page 5

season..." Why then, am I such an Epson supporter? Because the hardware is sound, and the product indeed easy to use. It has brought me into the computing world with a lot more confidence than any other system I tried. In view of it all, I am glad that Epson and Rising Star are taking their time to make sure this next release is well tested.

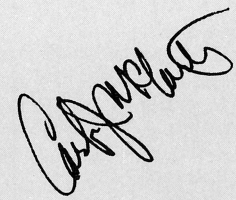
What about the EpsonConnection?

Rumors have surfaced that we are "Epson controlled". That is not the case. We are entirely independent, there is no "contract". In the working relationship we are developing with Epson we will maintain our editorial control, and focus on advertising arrangements and access to products and information.

Now to Dale's original question. "What is our future?" Our future is dependent on several variables:

- Epson working with third party companies to help them produce software and hardware items to help us grow and expand our systems.
- On the efforts of Rising Star Industries to produce products to integrate into the HASCI environment they created, and to provide third party companies the information they need.
- On dealers and distributors to support the product, and on how supportive and resourceful we can be to one another.

In this era of electronics and telecommunications let's use our resources well.



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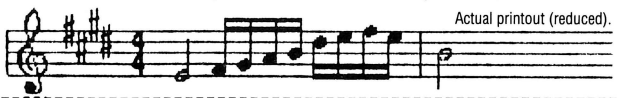

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RISING STAR

Epson America Speaks Out About Valdocs 2.0

By Chuck Champlin, User Group Support and Jessica Hatch, EpsOnLine Sysop

TORRANCE, Calif. — Word is out that Valdocs 2 went into Alpha Testing December 17 at Epson, after almost a year in development at Rising Star. We're happy to confirm it. This was a major step forward in development of the software that is anxiously awaited by many current owners of Epson QX-10 computers.

Expectations for the software have been high, but who really knows how far the software is in its development, and whether it will measure up to the expectations?

Peter Bergman knows. He's Epson's Product Manager for Desktop Computer Systems — i.e. the QX-10 and QX-16 computers. With a lot of experience in the microcomputer industry, he's the right guy to have in charge.

In an interview, Bergman addressed questions being asked by many users.

"I think it's a good idea to talk about what's going on," Bergman said. "Our customers have been so loyal to Epson, we certainly owe it to them to bring them into the loop."

Peter, everyone wants to know what's the delay with Valdocs 2. What's the hold up?

"The truth of the situation is that we underestimated the time it would take to develop what has turned out to be probably the most ambitious software package ever.

Then we announced the product too early. We obviously had hopes of getting it out when we promised — basically last June — but, again, it just turned out to be a bigger job than we thought.

To complicate things even more, just when we had an initial stable version of Valdocs, last February or so, Rising Star found that the whole program could be made to run faster and better if they changed the program to run in a new version of the Forth programming language.

It was a difficult decision to make, but in the end it seemed better to go with the improvement. In a mutual agreement between RSI and Epson, we decided to do what has amounted to virtually a complete rewrite, starting about last March. In actuality, that's when the development effort began, barely ten months ago. To be going into Alpha Testing now is better than average for the industry. The problem is, everyone thinks the product has really been in the works longer than that.

If I may put our own situation in perspective for a moment, let me point out that just recently there was a long article in the Wall Street Journal about other computer software and hardware products that have been seriously delayed for various reasons. One of the prime examples was Microsoft's 'Windows,' which is 14 months behind. They had promised the product last April, and it won't be out now until June. I don't know whether to be happy or mad, but the article didn't even mention Valdocs!

And let me say further, it must be obvious that we'd LOVE to have that software out there right now! Sure, we could push the release button and put it out the way it is. But it wouldn't be right. We've simply got to finish the job. We don't want people to have to go through what they did with Valdocs 1.14. We've got to finish testing and refining it."

What is the testing procedure that's going on now? How long will it take, and when will you know you're done?

"Both we and RSI are using an industry-standard, two-level approach — Alpha and Beta testing. RSI has been doing its own internal development testing since September.

Essentially , the whole process acts like a series of strainers that get finer and finer. The biggest flaws get caught first, then the little ones. We categorize problems by level of severity, from Level 1 bugs that make the program totally unreliable or cause data loss, down to Level 5 that involve cosmetic problems like misspelled words in help menus. The last 2% of problems are the toughest to eliminate, because it takes so much work to even find them.

One bug that was causing us some problems, for instance, was when you were transmitting a document in the Mail module. If you pressed STOP to cancel the transmission, the program would freeze up. RSI hadn't built in an escape route for that STOP command. That's easy to overlook during programming, but testing showed it up. That's been fixed now.

The goal of Alpha testing is to discover and eliminate all the Level 1 through Level 3 type bugs in a 'laboratory' environment. Beta Testing with experienced testers in real-world settings will identify any additional problems. We expect to be going to Beta Testing fairly soon, in the next few weeks. We've got an internal calendar of what's supposed to happen when, but we are reluctant to give you any dates. That would probably just set up unrealistic expectations again."

Will Valdocs 2 be much more stable than the first release?

"You know, the programmers over at Rising Star have a good way of illustrating what we're up against. They talk about the 'cat walking over the keyboard' syndrome, where some chance event can create an impossible series of keystrokes that no normal tester would ever try out. That might be just what it takes to crash the program.

It would take 1,000 man-years to test all the possible keystroke combinations, to find which ones create problems. That's obviously impossible. But we feel that our Alpha and Beta testing effort will do a thorough job in identifying and correcting problems before Valdocs gets to the customer. We're even using our HX-20 portable to record keystrokes as they are made. That way, sequences that lead up to a problem can be reconstructed.

So, to answer your question, both Epson and RSI are doing everything they can to make this software as reliable as possible."

How will Epson and RSI finally decide when the software is ready?

"When will we know we're done? The final decision will have to be somewhat subjective, because making software that's as sophisticated as Valdocs 'perfect' is probably impossible. But simply put, we'll be finished

when all problems that we and RSI have been able to find have been fixed. Then it will be approved by our Software Quality Assurance Board and certified for release. At that point it should take about three weeks to get the disks duplicated, shipped to the distributors and then out to the dealers."

Will end users have to "prove" to the dealers that they should get the software?

"No. Anyone who wants the software will be able to buy it. Our reasoning is that the people who should get it — current QX-10 owners — will be able to, with no trouble. They'll just go to their dealers and pick it up for $49.

Note, I said $49. This is for a software package with features that we feel easily outdistance competitive packages at $500 and $600.

The decision to go with the $49 price for QX-10 owners — which is our cost for packaging and shipping, excluding development costs — was because of our strong commitment to our customers. Never say we don't care!"

What documentation will come with Valdocs 2?

"Most likely, not all of the documentation will be ready when the product is first shipped. There will be a manual called 'Introducing Valdocs 2,' that will highlight the features of Val 2. Users will be able to send in a card to get the two other books: a Valdocs tutorial and a Valdocs reference manual."

What is the difference between the QX-10 version of Valdocs and the QX-16 version?

"There are a couple of significant differences now. One is that Valdocs for the QX-16 will come on one quad-density (80-track)disk, while the version for the QX-10 will have two 40-track disks: a system disk with the operating system, and a 'run time' disk with the Valdocs modules such as the Editor. This will involve a bit of disk swapping, but Alpha testers are not finding this to be difficult. Again, by comparison, some competitive programs require as many as eight diskettes.

The other major difference is that the 512K RAM memory that will now come standard with the QX-16 allows Valdocs 2 to run faster on the 16 than on the QX-10. The version on the QX-10 will still be considerably faster than One series Valdocs on the QX-10. On both the QX-10 and QX-16, Valdocs will run on the 8-bit side, under TPM III.

I should emphasize again that both versions of Valdocs are being developed in parallel. We won't be holding the QX-10 version of Valdocs until the QX-16 is ready for release."

Now that you bring it up, when will the QX-16 be released?

"Because of the hardware changes we've elected to make to the QX-16, the release date has been pushed back from what we first announced at our October press conference. The major difference is that the random access memory (RAM) will now be 512K instead of 256K as originally announced. This will make the computer more competitive in the MS-DOS market place. I won't give you a firm date yet, but I expect it to be in the spring."

And finally, Peter, can you give us some better idea when we can expect Valdocs 2?

"Again, I just can't provide a specific date yet. I expect to be able to make an announcement when we go into Beta testing, in a few weeks to a month from now. But generally, everything looks like it will be coming together in the spring." ■

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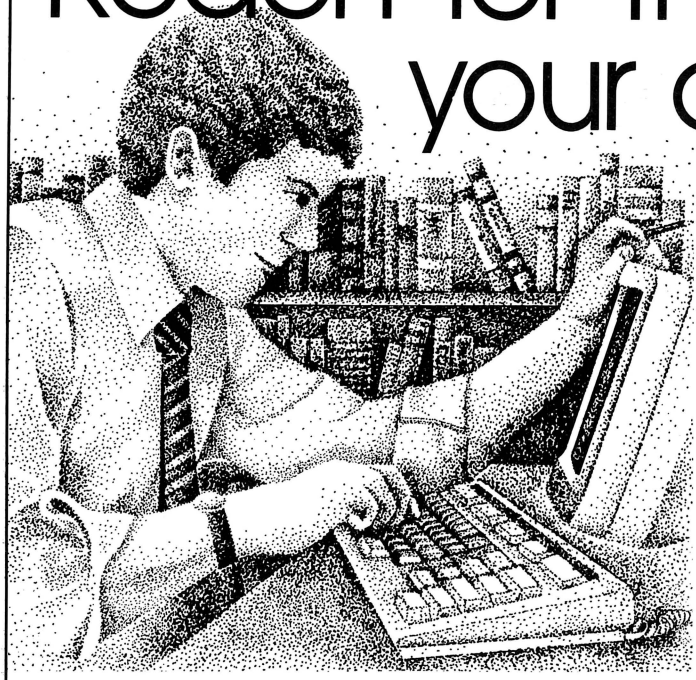

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FEEDBACK from our readers

E-ZCODE Rebuttal

I want to thank you for the review of our program E-ZCODE+ that appeared in the January issue of the EpsonConnection.

For the most part I felt that the review was fair except that there were a few comments that would mislead your readers into believing that there were problems with E-ZCODE+, when in fact the problems or shortcomings mentioned are not caused by E-ZCODE+ at all.

There were three areas where I disagree with the evaluation of the program. I will address them in the order that they appeared.

In referring to the dot graphics ability you said, "Unfortunately it is a difficult and tedious procedure". I will readily agree that dot graphics is an intricate and somewhat difficult procedure but the method we use in E-ZCODE is still easier than the only other way I know, MBASIC. For instance MBASIC does not allow a multiplier, (even though the printer manual says it will), and the resulting code is less than one third the size of an MBASIC program that will do the same thing. Furthermore a MBASIC program cannot be used with a VALDOCS document the way our code can, (like this letterhead).

In regards the comment, "you cannot right justify any document". This is just not true. There are some cases where right justification cannot be used BUT this apparent problem is not in any way caused by E-ZCODE+. The EPSON printer manual very carefully explains that you will not be able to justify ELITE print, because the width of the individual letters is different. They also explain that mixing different fonts on the same line will cause a similar problem. The point that I am trying to make here is that our program will, allow you to use any font or function that the EPSON PRINTER will support. We make this point very strongly in the instructions that accompany our program.

The last item on which we have a difference of opinion is the one where we claim that, "Mail list programs are ungainly and time consuming and with E-ZCODE+ these problems are solved". Here I would like to reiterate a point that we make in our advertising and in our program documentation. E-ZCODE+ is a VALDOCS ENHANCEMENT PROGRAM. The VALDOCS "MAIL" program does not allow you to insert

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names and addresses or anything else into the body of a VALDOCS document. Our program does. The VALDOCS "MAIL" program will not allow you to even address an envelope from the address book except by the peel and stick method. E-ZCODE+ will not only allow you to address the envelope it will allow you to place your company logo, "IN DOT GRAPHICS", in the return address position. There may be a program somewhere out there that will do a better job than ours but I rather doubt it, because most of the other enhancement programs will not work easily with VALDOCS.

The only thing that we are objecting to in this letter are the direct comments and insinuations that the problems mentioned were the fault of E-ZCODE+.

Sincerely,
John E. Lovejoy

Mr. Lovejoy, we thank you for your letter, and appreciate your opinion.

A Computer / Receiver Interface

Nine months ago I wrote asking for information about interfacing the Epson computer with a radio receiver in order to copy radio teletype and morse code. I received many letters asking me to forward any information that I found. The following is a review of the Kantronics U.T.U. that accomplishes this task with some very impressive results.

The Kantronics U.T.U. (universal terminal unit) was reviewed by three amateur radio operators in Kodiak, Alaska. During this time the U.T.U. was connected and operated with two personal computers; the Epson QX-10 and Osborn 1. The outcome was more than satisfactory with both machines.

Kantronics U.T.U. is a new type of computer/transceiver interface. With the U.T.U. a computer, and your transceiver, your station becomes a complete CW/RTTY/ASCII/AMTOR send-receive communication facility. While most systems require additional software to operate, the U.T.U. uses an internal microprocessor to send and receive in all four coded amateur formats. Connection to your computer is via the RS232 or serial port. In this way, the U.T.U. is universal to many different computers.

The internal U.T.U. program features include:

- Morse code send/receive 6-99 WPM.
- Radioteletype send/receive 60, 67, 75, 100, 132 WPM.
- ASCII send/receive 110, 150, 200, 300 baud.
- AMTOR operation Modes A, B, and L.

The modulator/demodulator portion of the Universal Terminal Unit uses switched capacitance filters to process the Mark and Space tones, and to prefilter both RTTY and CW signals Front panel indicators to make tuning easy with Mark and Space indicators are used for RTTY and Lock and Valid LED's for AMTOR.

The U.T.U. is attached to your computer and transceiver via standard jacks and connectors on the back panel. All of which are provided with the unit, except the serial port connector to your computer. Kantronics did a very good job in leaving nothing out. The pin and wire connecting diagrams are very clear. They caution you about the RS232 port connections on your computer. We encountered one problem with this, where Pin 2 and 3 on the Osborn 1 were reversed.

Kantronics lends some help with the software necessary to communicate with their U.T.U. modem. Most terminal programs supplied with computers used to talk

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to telephone modems will work very well with the U.T.U. Kaypro's software is called SUPRTERM.COM; Osborn 1 is called OTERM.COM; Epson QX-10 is called MTERM.COM (VALDOCS MAIL will not work); and IBM PC is called COMM.COM. Kantronics has done a good job with their manual to flow chart a basic program to communicate with the U.T.U.

Kantronic's U.T.U., although set up to demodulate RTTY at 170 HZ shift (which is standard for amateur radio), does not stop there. We found by tuning just off the Mark signal that it would also copy many commercial stations outside the amateur bands with shifts as wide as 850 HZ. This is due to the Terminal's dual filter system.

The cost for Kantronic's U.T.U. is under 200 dollars at most amateur radio outlets. I believe from the information provided in the Kantronics manual, that people interested in copying CW, RTTY, ASCII, or AMTOR should have no problem connecting their computer with this terminal unit. For more information you can write Kantronics at 1202 E. 23rd Street, Lawrence, Kansas 66044 or call (913) 842-7745.

Thank you,
Glen A. Fuller
Kodiak, Alaska

Compare Your Statistics

Dear Epson Connection:

The article "Compare Your Statistics" in the January 1985 EpsonConnection may mislead readers about the RSI Basic. I wrote a multiple correlation program in RSI Basic and, after clearing high user available memory to get 27K free, was able to regress 29 variables over 50 observations before running out of memory. Mbasic runs out of memory at approximately the same point, when I make two programs, the first to read data and the second to process data, and them merge them.

For regression purposes RSI Basic is bigger than Mbasic. The reason is this. Of the so called 83K available in RSI Basic, some 50K plus can only be used to store the program. Only some 27K is actually available for number crunching. In Mbasic 33K is available, but it must be divided between program storage and number crunching. Thus a big program would seem to reduce the number crunching ability of Mbasic but not of RSI Basic. This is misleading however in that overlays can be easily used to conserve program memory in Mbasic. The fact that the program does not complete with number crunching in RSI Basic is likely often, as in regression analysis, to be of limited, if any, advantage to a programmer.

It may be possible to write a statistical package that could make use of RSI Basic's program storage in such a way that RSI Basic's operating memory of 27K would be better than Mbasic's operating memory of 33K plus Mbasic's program storage via overlays, but it is not self evident that this can be done. In any case, the alleged 83K is very misleading. GW basic, with 60K fully usable, can, via overlays, handle very much bigger problems than can RSI Basic.

Sincerely,
Alan Nichols
Mt. Pleasant, MI

»USER TIP«

Using the Hayes SmartModem with the Geneva Connection

by Jay Bond

To use the Hayes SmartModem with the Geneva Connection on the Geneva, make sure the modem is set up as follows:

1. Turn the volume control to full volume.
2. Turn switches 2, 4, and 7 on (up). Leave the other switches off (down).
3. On the Geneva, type:
   PORT EXT <RETURN>
   BAUD 300 <RETURN>
   PROT X <RETURN>
   TEXT ATDT 5394466 30 2 <RETURN>
   (The AT gets the modem's attention. The DT is for the dial tone.)

   TERM <RETURN>
4. Then press <RETURN> a couple of times.

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CP/M BEGINS

If you have never used the CP/M disk that came with your Epson desk top computer, then this article is dedicated to you. The intention here is to present rudimentary basics only, just to help you get started.

by Carolyn McCarthy

First, determine what version of CP/M disk you have. The initial release with the Epson was version 1.13A. This came in the Valdocs User Guide Blue Book with the Valdocs version 1 software. Following that release, came several other upgrades, CP+ was presented in a red three ring binder and was labeled *Taurus Software Corporation CP+ Version 1.2*, then CP/M-80 R2.2 Version A2.20 was followed by Version A2.21, and finally by Version B2.20. Version B2.20 was the latest *formal* release, and comes in an Epson blue two binder set. This version has been available through many Epson dealers, and is currently delivered with the QX-10. There has been a version called CP/M-80 Version 2.25, which is not a formal release, but was provided for those with the QXPC2 board and a Comfiler hard disk. The main function was to permit partitioning of the hard disk drive with the QXPC board, however there are some very nice enhancements in this latest released version. The point here is to suggest you check the label on the CP/M disk you have, as there may be slight differences in the procedures I will outline.

What is CP/M?

CP/M is an arconym derived from Control Program for Microcomputers. It was writen by Gary Kildall in the early 1970's while he was working for the Intel Corporation. In 1976, Gary formed a new company called Digital Research, to market CP/M. Software can be divided into a few major categories: Systems, Utilities, and Applications programs. A mailing list program, wordprocessing package, game, spreadsheets are all examples of applications programs. The QX-10 owner receives two different systems (or three) when they get their computer: TPM (the operating system for Valdocs), CP/M, and MSDOS if you bought the QX Plus with the QXPC board from Titan. Systems programs are designed to help other programs perform tasks. An operating system is a basic building block, its job is to control and coordinate the resources available in and around the computer. What are the resources available? Access to the memory, monitor, keyboard, printer, modem, and anything attached to your computer are all resources that must be coordinated. The operating system is housed on the first two tracks of your system floppy disks. If you put a data disk, or blank disk into your left disk drive and turn your computer on, the screen will flash "INSERT DISK" and the red light on the drive will come on and off. The computer is looking for a system to tell it what to do. It is this operating system which wakes up the rest of the computer, to know there is a keyboard attached which it will accept input from, or a disk in the drive to attend to, etc. CP/M has been the most popular operating system in the world for a long time, and there are a tremendous number of programs available for CP/M computers.

How do I run a CP/M program?

There are a few simple things you should notice about any programs you want to run. The names of the programs, and in particular the file endings (the three letters after the .) will indicate what type of program you have on your disk. Let's find out what is on a disk. Put the CP/M disk into the A drive and turn the computer on (which is called a COLD START or COLD BOOT). When you see the A>, type DIR<CR> (remember the <CR> only tells you to press the return key, don't type it in) and a directory of what is on your disk will be displayed. Now take any program disk, like a Disk-of-the-month, or any disk you know has something on it and place it in the B (right) drive. To see what is on that disk type dir B:<CR> at the A>. There are just a few file endings you should take notice of at this time. There are files with a .COM ending. This indicates it is a file (which has been COMpiled) which you can run directly. Type in the first part of the name, the part in front of the .COM part press the return, and it will run. Programs which end with .BAS are BASIC programs, written in the BASIC language. To run these programs you must have MBASIC.COM (which is on your original CP/M disk) on one of the disks in the computer. For starting out, it is easiest to use your original CP/M disk in the left drive, and a disk with the basic programs in the right drive. At the A> type in the following: B:<CR>. This will take you to the B drive, you will see the red light on that drive blink on briefly. Now you will see a B>. To run a basic program which is on your B disk now, type in the following: B>A:MBASIC monopoly.bas<CR>. This starts up the MBASIC program, and tells the computer to go to the A drive and

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find MBASIC, run it, and load a file on your B disk called monopoly.bas and begin to run the program. Now if you don't have monopoly.bas, substitute the name of a basic program you do have.

What are these other file endings?

A few other common file endings you might find are:

.DOC — This is a document file

.TXT — This is a text file just like a document file

.SYS — This is a file used with TPM and Valdocs and will not run in CP/M as it is

.VAL — This is the file ending on Valdocs document files

If you would like to see what is in a text, document, or basic file you can view them by doing the following. At the B>, type in the following: B>Type filename.DOC<CR>. You will then see the file scroll up your screen. If you want it to pause for a second, press the CTRL key, and while holding it down press the S key. Press return and it will start scrolling again.

One last helpful thing to try out is to learn how to make a printout of a file. If you would like to have a printed copy of your directory to place on your disk, or to store for future use, you can do the following: To get a directory of your disk in A drive be sure your printer is turned on first, then type A>^Pdir<CR> . You will not see the ^P on your screen, but you should hear your printer beep once. The A stands for holding down the CTRL key, while pressing the next letter indicated, in this case the P. ^P works like a toggle switch, it will turn on the printer to print out everything you do on the screen, and it will turn it back off again. To get a printed copy of a file you used the TYPE command to look at, you do the same thing: A>TYPE filename.doc^P<CR> will do it. To make a printout in condensed type on a dot matrix printer do: A>^O<CR> (not zero) then use ^P, to turn on the printer again you will not see it on the screen. To reset the printer back to the original type type: A>ESC@<CR> where ESC is the escape or margin release key.

This is enough of a beginning, be sure you try it out, experiment a little, and refer to your manual for more interesting things to try. ■

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Questions and Answers

Q How can I get the system time and date through a BASIC program?

Frank Scanlan
Coral Springs, FL

A *Below is a routine taken from the RBBS time routine. It has been modified to also allow for the day of week, and made much smaller and error-free.*

```
10000 REM * MBASIC TIME ROUTINE
10010 REM * Returns 3 variables: DATE$=DATE,
      TIME$=TIME
10020 REM * DOW=DAY OF WEEK (SUNDAY=1)
10030 OUT 61,8:GOSUB 10110:DATE$=TH$
10040 OUT 61,7:GOSUB 10110:DATE$=DATE$+"/"+TH$
10050 OUT 61,9:GOSUB 10110:DATE$=DATE$+"/"+TH$
10060 OUT 61,4:GOSUB 10110:TIME$=TH$
10070 OUT 61,2:GOSUB 10110:TIME$=TIME$+":"+TH$
10080 OUT 61,0:GOSUB 10110:TIME$=TIME$+":"+TH$
10090 OUT 61,6:GOSUB 10110:DOW=VAL(TH$)
10100 IF LEN(TIME$)=8 AND LEN(DATE$)=8 THEN
      RETURN ELSE 10000
10110 TH=INP(60):TH$=""
10120 IF TH<10 THEN THS$="0"
10130 TH$=TH$+HEX$(TH)
10140 IF VAL(TH$)<10 THEN TH$=THS$+TH$
10150 RETURN
```

Q Do you know of a tape backup system that is compatible with the QX-10 & Comrex CR1510? I'm presently using MUFBAR backup utility with Champion Accounting software and find that at the time the Champion MASTER1.DBR file has to occupy more than one floppy, the two programs quit talking to each other.

Richard Stasser
Grand Lake, CO

A *There is an inexpensive alternative to this problem other than using the tape backup system. An excellent hard drive backup utility, called ARCHIVE, can be found on the latest release of CP/M. This program is easy to use, and will allow large hard drive files to span over as many floppy disks as required. See your Epson dealer and ask for the CP/M "B" 2.25 release. Cost is approx. $10.00.*

Q Whenever I use the Valdocs word processor, I am unable to get the graphics that can be displayed on the screen to print out on the printer. I have a QX-10 and RX-80 F/T printer.

Kerry Watson
Covington, KY

A *The RX series printers will not produce the QX-10 special graphic characters and symbols from Valdocs. Only the FX and JX series printers will print the graphics with Valdocs 1.19. The FX series printers contain memory buffers which the QX-10 character set can be downloaded into. The RX and MX series printers do not have these buffers.*

Q I am wondering what your group feels is the best business software out that will run on the QX-10 for payroll, accounts receivable, payables, etc. I also need a good grade book program, as I am a teacher as well as businessman. Do you keep a list of what is available as public domain programs?

Allan Claudson
La Grande, OR

A *We have also been looking for business software which is highly recommended by users, and are conducting a survey on our reader response card which appeared in last months issue (February). Be sure to send in your reader response card. We will compile this information, and publish among other things, what readers such as yourself feel is the most widely used and recommended software. Your input is very important to us and will directly benefit you in this magazine. It is up to the readers to assume the responsibility to contribute, and respond with this information.*

To your second question, we know of no "gradebook" program for the QX-10; however, Orange Microware does have some programs for teachers, contact them at: 4418 E. Chapman St., Suite 311, Orange, CA 92669. Also have you considered using a spreadsheet program to organize your data and perform your calculations?

In regard to your last question, it would be unbelievably time-consuming to compile and maintain a list of all available public domain software for the QX-10. Any public domain software we come across is first checked to make sure that it does run on the QX-10, then we place them on the EC bulletin board. A listing of all the public domain software available on our bulletin board can be found on the board on drive A0: under the filename of +CATALOG.LQR. This file contains all the filenames and descriptions of each file found on our board. The +CATALOG.LQR listing will be published in our annual resource guide.

Q As a writer, I use a standard 1983 model QX-10 and Valdocs 1.18/1.19 to compose, edit, and re-edit articles until the words are right. But once about 20 pages of double spaced text is input, editing functions slow down and often the message "Consolidating all changes — Please Wait" appears, after which the cursor returns to page 1, line 1. How can I avoid this? A hard disk? A semi-disk? Also, I'll be working in Egypt and North Africa next year and would like to make my HX-20 with Skiwriter act as much like my QX-10 as possible. Would my RX-80 printer, a serial-to-parallel interface cable, a video display converter, extra RAM, a transformer (if required) and a lot of hope be the best way to proceed, or should I get a Geneva and its little printer, or just go back to my Olivetti portable typewriter? Thanks.

John McDougal
Columbus, OH

A *There is nothing you can do to prevent the "Consolidating all changes" message when running Valdocs. This is Valdocs way of unloading it's basket full of apples after the basket gets full. A hard drive may slightly decrease the required time to do this operation, but it won't prevent it. As for the latter question, if I were you, I'd get a Geneva and WordStar for both computers. This would make both machines very similar in operation, plus avoid the "Consolidation" process.*

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In regard to your last question, it

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—all boards 300/1200 Baud unless indicated.
—* indicates 300 Baud only
—H.D. indicates Hard Drive

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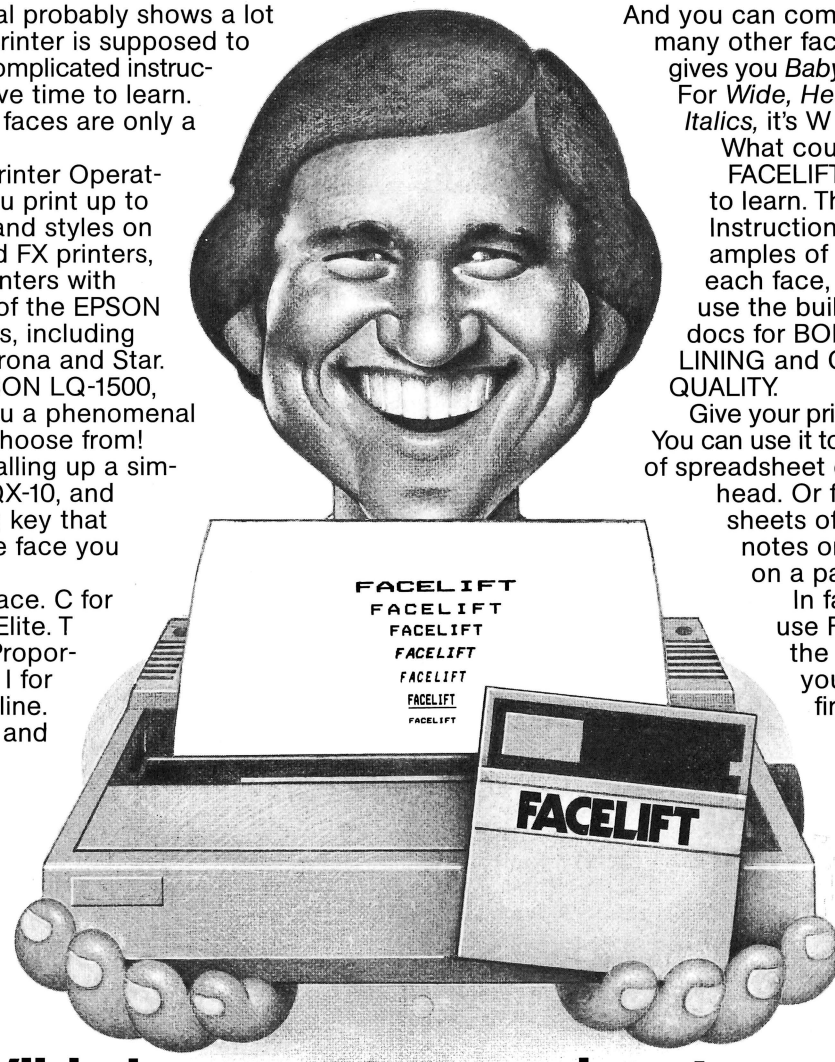

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GRAND JUNCTION

Multiplexing the QX-10 With Bi-Tech™

By Allen Howell

If you use more than one QX-10 in your business, have you ever wished for an easier way to share data files other than performing floppy disk swapping all the time? And what about that hard drive that Fred uses in the other office, while all you have on your QX-10 are the two standard floppy disks? Fred doesn't use the entire capacity of the hard drive, so there's wasted space there that you could use if you could somehow access Fred's hard drive without interrupting his system.

OPERATING MODES

The stock QX-10 is a single user, single tasking system. What this means is that only one person may operate the QX-10 at once, and that only one task (program) may be run at a time. All of the peripherals (printer, modem, hard drive, etc.) may only be used by the system that they are connected to. Obviously, this is the configuration that the manufacturer intended to produce, hence the name "personal" computer.

Before personal computers caught on in the late 70's, most computers were know as "mainframe" and "mini" computers. These computers were almost always multi-user and multi-tasking systems, and only affordable by medium sized and large businesses. A multi-user system is a computer which will allow more than one user to use the system at a time. Naturally, since more than one user could use the system at once, not everyone was going to perform the same operation on the computer, therefore, these systems were designed to operate more than one program at a time. These systems were large and expensive, as were their peripherals. The CPU itself, larger than a refrigerator, and the hard drives and high-speed printer, commonly the size of an electric clothes dryer, made it unwieldy for each user to have their own unit, thus one had to share the same printer and hard drive and CPU.

Most small businesses could profit from the efficiency of a computer, but simply cannot afford or justify a large mainframe computer. Micros are purchased to fill the efficiency hole. In most small businesses, a single user personal computer is just the prescription. But what about the scenario described in the first paragraph? Is there a way to allow micros to share peripherals and in some way, act like a mini or mainframe computer?

Networking is one alternative. A network is a system that allows micros to communicate with each other, and with common peripherals.

Networking is one alternative. A network is a system that allows micros to communicate with each other, and with common peripherals. Some of the advantages of a Local Area Network (LAN) over a multiuser system are mainly price and CPU speed. When using a multi-user system, the same CPU is used by all of the users, and can very easily become bogged down with such a work load that at times, a user would think that the system simply quit working or had gotten "hung up". When using a network each micro is still it's own computer and processing speed is not affected by how many users are connected into the network. One major disadvantage of a network is that the network device usually does not allow simultaneous use of the same peripheral. For instance, more than one computer may be interfaced into one common hard drive, but if one user is accessing the drive, any other users must wait until the drive is no longer being accessed before they can use it. The same

Multi-user systems allow simultaneous user access to storage drives.

situation holds for networking printers. Multi-user systems do not have these problems, since they are designed to allow simultaneous user access to storage drives. Files to be printed are usually lined up in a spool queue, which is simply an area on disk that stores files to be printed on a "first in, first out" basis.

A HARD DRIVE MULTIPLEXER

What does all of his have to do with "multiplexing"? Better yet, what is a multiplexer? Simply put, a multiplexer is a device which is capable of receiving information from two or more outside units, organizes this information, and properly distributes the information to another device. What? Well, let's use a down-to-earth definition using the first paragraph scenario. If a multiplexer was connected between two computers and the hard drive, both users could simultaneously access the hard drive without interruption or waiting. A multiplexer, in a sense, is a combination of networking and multi-user operation. It is related to networking in the sense that each computer is still its own system, and the CPU speed will not decrease as more users use the multiplexer. Multiplexing is related to multi-user in the sense that the multiplexer allows users to use the same drive at the same time. If several users are performing heavy disk operations through the multiplexer, there is a significant decrease in access time; however, each user is given small increments of disk access. This coordination prevents any user from "holding up" any other user, but also slows down the drive operations for all users.

Another difference between the multiplexer and networking is that most networking systems transfer data in serial instead of in parallel. A parallel interface speeds up data transmission time by as much as 10 times.

Our Office Experience with the Bi-Tech Hard Disk and Multiplexer

I was very excited when our Bi-Tech hard drive and multiplexer was finally delivered to our office in mid November. As much as I like micros, I still missed the environment of the larger multi-user systems I operated in the Air Force (I also envied Fred because he had the QCS hard drive).

The system Bi-Tech delivered to us was: a fixed 20 Meg hard drive unit with a built-in 10 Meg removable cartridge backup, the multiplexer (which supported up to 4 QX-10's), connecting cables, 4 host interface cards, and software to initialize the system.

Installation of the Bi-Tech was simple, as long as you didn't try to install it by reading the manual. We found a solid and level tabletop to place the hard drive on and placed the multiplexer unit on top of the hard drive. A three foot cable connected the multiplexer to the hard drive. There are 4 cable connectors on the back side of the multiplexer which connected to the QX-10's. We had to remove the expansion slot covers on the main CPUs of the QX-10s and insert the Bi-Tech cable interface cards in an empty expansion slot. Now all that was left to do was connect the cables from each computer to the multiplexer and turn on the power.

The four QX-10 to multiplexer cables shipped with the system were of different lengths. One was 5', one 10', and two were 20' in length. Immediately we realized that we would need one or two cables longer than 20' to reach our respective desk. At first, Bi-Tech informed us that the cables could span a distance greater than 20', however, this would require a signal booster, which cost approximately $350 each. We moved our desk closer together. It was later realized that 20' is not the maximum distance without a booster, but was actually 50'. A signal booster would allow a span of up to 300'.

The manual was a disappointment. Only about 25% of it was relevant to the QX-10. The rest of the information in the manual covered installation procedures for other computer systems. However, Bi-Tech did send along a computer printout sheet containing software update information and the systems limitation with the QX-10. In fact, Bi-Tech sent us updated printouts about every 2 weeks, and they also proved to be a great supplier of floppy disks as they updated the system software.

Operation of the Bi-Tech system went rather well, at first. The system was sent to us already configured by Bi-Tech. 10M was allocated for TPM III, 5M for MS-DOS, and 15M reserved for CP/M. 10M of the CP/M allocation was assigned to the cartridge. We used this scheme for about a month while we were creating the December issue. About one week before Christmas it was decided that the Bi-Tech should be put to fuller use.

Why not place our entire mailing list on it? This would be a good test to run the system through and would give us a chance to convert our mailing list from Peachtree List Manager into dBASE-II. This required that the entire hard drive be dedicated to CP/M to allow us maximum use of the entire 30M available. We re-formatted the Bi-Tech, and spent one night transferring the data from a 5 year old Zenith to the Bi-Tech via 9600 baud serial port connection.

The system ran smoothly for several days until the conversion of the mail list files into dBASE format process was begun. About midway through the conversion process the convert program crashed and returned with an "A>" prompt. Baffled, we displayed a DIRectory only to find a scrambled directory and many blown files. A phone call to Bi-Tech revealed that in order to run a Bi-Tech hard drive with CP/M only, we would need a special CP/M boot disk. The reason the system crashed was because CP/M can only handle 8 or so megabytes per drive, and the drive we were converting files on, according to STAT, allowed approximately 19 Meg on drive A. During the file conversion, the Bi-Tech exceeded the CP/M 8 Meg limit, and therefore, data started overwriting other data. Great. Good thing the data was backed up on the cartridge AND floppy disks before it crashed.

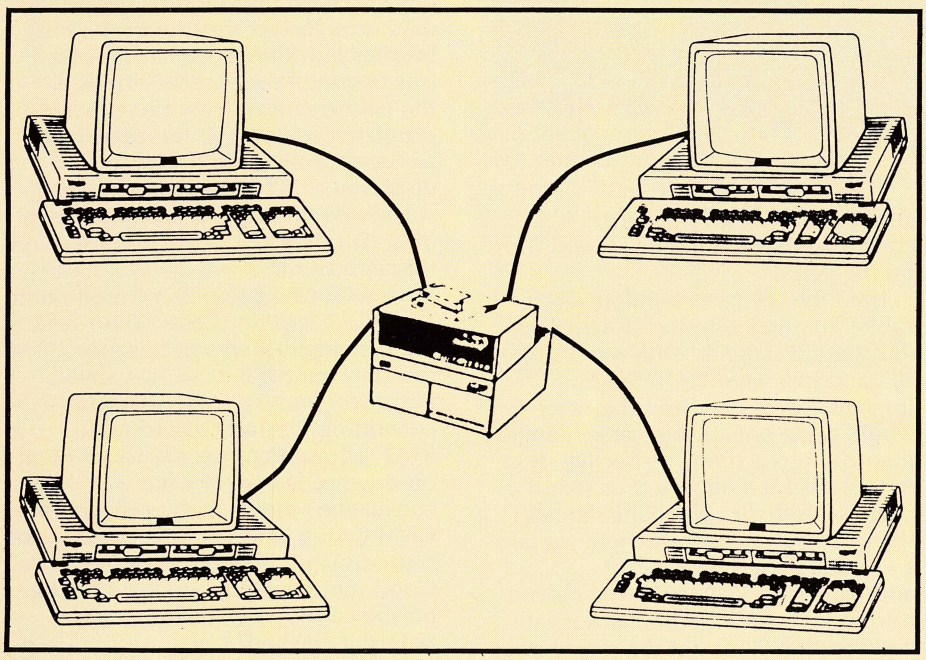
A few days later a new Bi-Tech boot disk arrived. The new system was immediately installed and we proceeded to re-establish the software. The new boot disk divided the fixed 20 Meg into 4 logical drives (A-D), and divided the cartridge drive into two logical drives (E and F). The QX-10's floppy drives were designated drives G and H, and the RAM disk was drive I. Each of the logical drives on the Bi-Tech were allocated approximately 4.8 Megabytes.

After using the system for about a week, we all noticed how the directory would occasionally create some kind of strange files. Now and then, a file would mysteriously contain small parts of other files. Also, some of our .COM programs would either not work or act really strange and run improperly. It was time to backup the hard drive and re-format it again. A few days later, the same thing happened. Phone calls to Bi-Tech would only result in them sending us a new update disk, but no real answer to our problems. Everyone was baffled. Discouraged

because we couldn't get much serious work done, another phone call was made to Bi-Tech and they agreed to send us another hard drive unit. It was possible that the problems we were having were hardware related.

About a week later we received the new system. The new system came in a smaller case, which was the result of Bi-Tech re-designing their systems. We re-installed the software only to find some corrupted files several days later (Would this ever end?). A few days later, Bi-Tech had finally acknowledged that the system had a problem. Apparently, other Bi-Tech users were having similar problems and they were in the process of solving it. As they explained to me, the problem was that the system wouldn't clear out it's buffer after a file transfer from one physical drive to another. Then, when other files were transferred, they would pick up the remains of the previous files that were still in the buffer, thus creating files which contained the parts of other files. Of course, this would cause a .COM program to go berserk!

The newest update arrived quickly and we have had no major problems since.



ADVANTAGES

Here are some of the advantages of the Bi-Tech multiplexing system as listed by our staff:

- Sharing a hard disk meant we didn't have to carry disk back and forth to each other.
- We modified a bulletin board program and installed it on the hard disk so it would auto-boot when users first accessed the system. This enabled us to leave messages to each other.
- It cut down tremendously on each person having to keep duplicates of favorite programs and utilities.
- We were able to access each others data without exchanging computers or files.
- We all had indirect access to the Comrex 420 high speed printer for quick printouts of our files, even though it was only connected to one of the multiplexed computers.
- Each system can access the same file for read operations. For example, our mailing list program could produce different reports on different computers while accessing the same file.
- With the system configuration we have, creating file backups is very easy and efficient using the removable cartridge drive.
- CP/M, TPM, DOS PLUS and MS-DOS may be used at the same time, as long as the system is configured to support all four at once.
- Four more computers may access the system with an optional slave multiplexer that simply plugs into the main multiplexer box.
- Different types of computers can access the same hard drive.
- The multiplexer supports any Western Digital 1000 series hard drive. This includes the QCS hard drives and by spring, the Comrex 1510 hard drive.

DISADVANTAGES

The Bi-Tech system does not currently support file lockout. File lockout prevents more than one user from simultaneously writing to the same file. Precautions such as this must either be controlled by the application software you are utilizing, or users must simply monitor each others activities.

Only one user may use TPM at a time. TPM has not been modified to update disk allocation tables to the drives, but rather, retains this information in each QX-10's memory. If your operations require functions mainly on TPM, this system will not be of much value as a networking system. Each computer must remain relatively close to the host system, however optional signal boosters are available if a system is to be placed more than 50' from the multiplexer.

We have all experienced software bugs & updated versions of just about everything. Being in on the beginning of any new computer, and hardware system, puts us in the position of testers, who take chances as the hardware and software are upgraded virtually while we are typing away on it. If you can live with this type of environment, which takes patience, and time being cautious (back-up everything daily if it is important) then you will survive well in this computerized age.

Summary

The responsiveness of Bi-Tech's staff was tremendous. A special thanks goes out to Al Rosen who always seemed to be there when we needed help. They are certainly working hard to keep their system updated and to improve it.

Having experienced this multiplexed environment, we realize how convenient and necessary it has become to us. We're hooked. This is a definite necessity in our minds for any business with more than two computers when hard disk drives are going to be purchased.

Continued on following page

Continued from page 18

Editor's note: We are planning reviews of the following multiplexing systems over this next year: Basic Systems (Cameo), Sunol, and hopefully the CPI units. We would like to encourage any users who are using these or other systems to share their experiences with us. ■

A Sample Price Guide to the Bi-Tech Multiplex Systems

The hard disk drives are available as half-height units, with or without removable cartridge hard drives:

10 Meg Hard drive	$1995.	with 10 Meg removable	$3795.
20 Meg Hard drive	$2495	with 10 Meg removable	$4495.
30 Meg Hard drive	$3495.	with 10 Meg removable	$5495.

The multiplexer for the QX comes with an adapter card to install in the expansion slot and 5 feet of ribbon cable. One multiplexer will serve four users, a slave multiplexer will be needed to add on additional users.

Multiplexer 1a	$795.
Multiplexer Slave 1a	$675.
Additional Host Adapter Card	$325.

Host adapters are available for TRS models, and the IBM PC.

The ribbon cable runs $1.50 per foot, or in pre-measured lengths $15. for 20 feet. Round cable is also available.

Note to users overseas: 220 VAC, 50Hz units are also available.

Companies with hard disks which have multiplexing available for the QX-10:

Bi-Tech Enterprises
10 Carlough Road
Bohemia, NY 11716
Phone: 516-567-8155
BBS: 516-567-8267

Computer Products International, Inc.
740 South Hillview
Milpitas, CA 95035
Phone: 408-945-0100
Telex: 910-686-0036

Sunol Systems
1072 Sepentine Lane
Pleasanton, CA 94566
Phone: 414-484-3322

Micro Mite Computers
Regency House
2 Rockstone Place
South Hampton SO9 1BG
England

Basic Systems & Supplies, Inc.
222 East Main St.
Anoka, MN 55303
Phone: 612-421-6722

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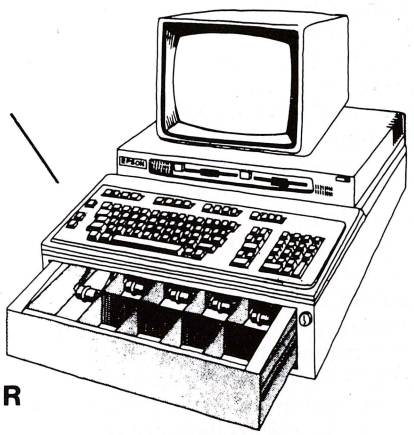

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Dr. George Yama,
Pulaski, Virginia

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HELLO

by Allen Howell

MYHOST

SPEC SPOT

Product: MYHOST
Type: Communication
Computer: Epson QX-10
Operating System: CP/M
Price: $100
Ease of Use: Extremely easy to use
Performance: Very good.
Documentation: Good, only 7 pages long
Manufacturer:
MYCROFT LABS, Inc.
P.O.Box 6045
Tallahassee, FL 32314

MYHOST is a system which allows you to grant Remote Access to your QX-10. This remote access may be either by modem or direct connection. MYHOST consists of two programs. BYE.COM, which is the program that handles remote access, and XFER.COM which is a file transfer utility.

To run BYE.COM, simply type in BYE on your QX-10. The BYE program will ask you what kind of communications you are using. Enter an A if you are using an Auto-Answer modem, B if you are using a dedicated line, and C for a direct connect mode. Then, BYE will ask you to enter a password. This password must be entered by the calling party for them to access your system. You may simply press <RETURN> for the password, and BYE will NOT ask the calling party to enter a password. Next, BYE will ask you to enter the program to run. You may or may not specify any program. If a program is specified to run, just type in the name of the program. The program MUST have an extension of .COM. Then, when a user connects to your system, BYE will transfer control to the program you specified. This program could be a bulletin board program, or for a business, an inventory listing and ordering program that customers use, or just any program.

BYE.COM ran perfectly on CP/M. If a user hangs up without typing BYE, the BYE program will re-set itself and wait for the next caller.

I could not get the BYE.COM to work properly under TPM. It would sometimes answer the phone, but it would not transfer control to my bulletin board program and thus crash the host system.

It would also be nice if the BYE data could somehow be stored in a data file. Each time BYE is initialized, you must enter the mode, password, and program to run. If you could type in "BYE BBS" form the A> prompt, where "BBS" is a data file, program startup would be much faster and more convenient.

XFER.COM is the file transfer utility that supports several different protocols. XFER supports XMODEM, XMODEM BATCH, CLINK, HAYES, and Mycroft Labs own MITE protocol. XFER would be used much like XMODEM is used on the RBBS/RTPM boards. As with XMODEM, a caller would type in XMODEM S STARTREK.BAS to download the file STARTREK.BAS. With XFER, the syntax is XFER F=STARTREK.BAS,P=X,S where F equals the name of the file, P equals the protocol code, and S means SEND.

MYCROFT does not name any specific modems that MYHOST will work on. They simply state that if the program is to accept dial-in phone calls, an auto-answer modem is required.

In summary, MYHOST is a good and reliable package and should perform well for personal or business environments. If you cannot find a good or reliable public domain BYE program, MYHOST should suit your needs. ■

MITE

SPEC SPOT

Product: MITE
Type: Communication
Computer: Epson QX-10
Operating System: CP/M 2.2 or CP/M B or TPM
Price: $200
Ease of Use: Easy to use menus, and built in help facilities.
Performance: Very good.
Documentation: Good and extensive. Over 150 pages.
Users: Users who tire of using different modem programs for different host systems.
Summary: A powerful communications package that should eliminate the search for an "all-in-one" communications package.
Manufacturer:
MYCROFT LABS, Inc.
P.O.Box 6045
Tallahasse, FL 32314

Mite is one of the most powerful communications packages that I have used. It is best suited for use with information utilities, i.e. CompuServe, Dow Jones, etc., especially if you frequently use systems with different protocols. Mite allows file exchange with a number of mainframes and micros, and supports multiple file transfer protocols, i.e. XMODEM, Hayes, Crosstalk, etc. Installing the MITE program is extremely easy. Just run

GOODBYE

the INSTALL.COM program, and select the computer and modem you are using.

The list of computers that can run MITE is indeed impressive. There are over 100 listed in the manual. This makes it very easy for users who have different machines to communicate with each other direct connect, as long as you have MITE properly set up for the specific machines you are using. MITE also supports over a dozen different modems.

The manual that comes with MITE is larger than most other terminal program manuals, and may seem frightening to users who first glance at it. However, the manual is simple, straight-forward, and very thorough. I was most impressed with the "Introduction for Beginners" section. Even experienced users may learn some basic facts about serial communications.

The MAIN MENU is the first screen you see when you run MITE. The menu is divided into the main menu and sub-menus. Here is what the menu looks like:

MAIN MENU

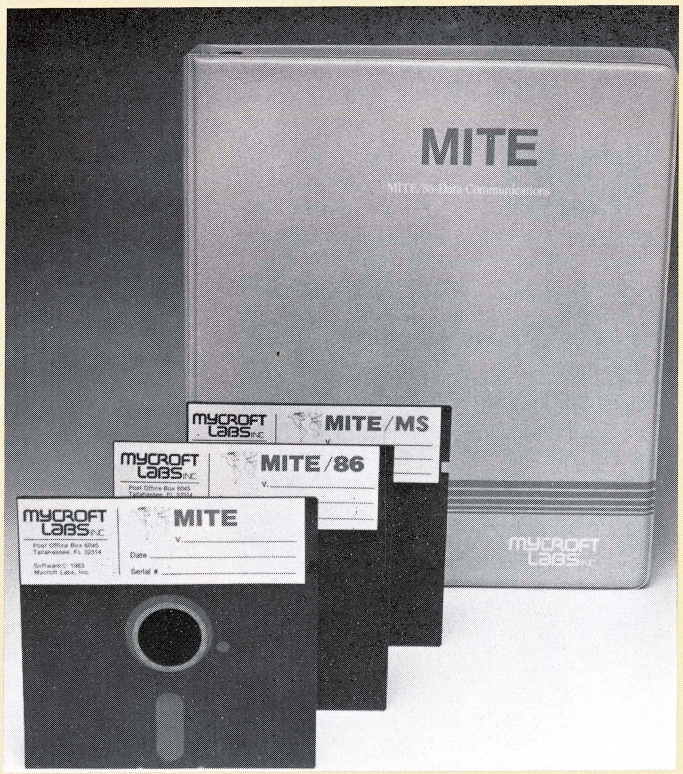
G - Go Start Communications
H - Hang Up Phone
I - Enter Site ID
L - Load Parameters from Disk File
S - Load Parameters on Disk File

Sub-Menus:

P - Parameter
U - Text File Upload
B - Binary file Xfer
C - Command Processor
O - Option
D - Text File Download
M - Marco Definition
F - Character Filter
X - Exit to Operating System

The on-line HELP is outstanding. Few, if any other communications packages have a help function like MITE. From just about any input line, you can enter a question mark and MITE will explain the function you are in and the expected input.

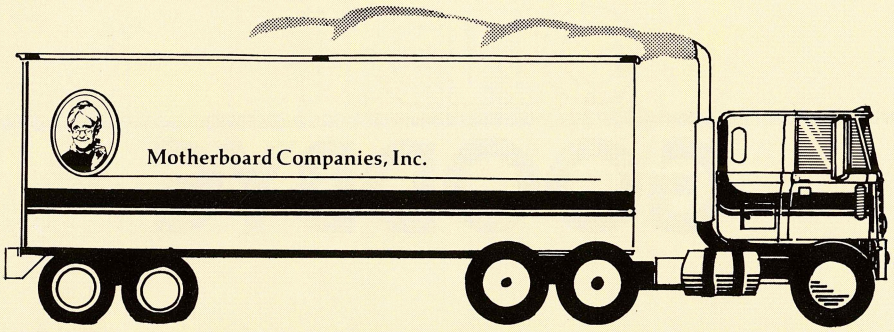
One of the single most useful options of MITE are the "L" and "S" options of the main menu. Let's say you wish to configure MITE to communicate with your favorite RBBS System. First, you may wish to enter the "I" option of the main menu to enter the name of the system you are configuring MITE for, i.e. EpsonConnection RBBS, or Greenville, Ohio RBBS. Enter the "P" option of the sub-menu section to set up the parameters for your favorite RBBS, i.e. baud rate, data bits, duplex, and the RBB's phone number. Once MITE is configured, enter "S" from the main menu to save the parameters for the RBBS, and specify a filename for the parameters file. You may wish to call it BESTRBBS, or EP/CON, or any valid filename. So now the next time you want to call this RBBS, simply load in the parameter file using the "L" option, and you are set to go. Set up all of the systems you call in this manner, and you will soon see that MITE can be a very powerful, efficient and easy to use program.



MITE also allows you to set macros. Macros are pre-defined commands or statements that you commonly use on the remote system you are calling. Macros can be used to enter common commands or statements to the remote site. MITE allows up to 10 macros, and the macro contents are also stored along with the other parameters in the disk files. I briefly read the section on macro usage in the manual and believe it was one of the more complicated features, but if properly understood and utilized, it could prove to be a very powerful feature.

A few more mentionable features of MITE include a Command Processor, which enables you to enter operating systems commands from MITE. The Character Filter allows you to screen out specified characters or control codes in files that you are downloading to your system. Originate and answer modes, and direct connect mode.

In summary, MITE is a good investment for users who often call many different systems, such as businessmen who call many different commercial systems, or even for bulletin board fanatics who can afford to call several boards each day. Most users can probably get along just fine with their public domain terminal programs, but if you can justify the cost and the need for MITE, you can't go wrong. ■



18 WHEEL DEAL

by Jerry DeBuhr

SPEC SPOT

Product: Trucker's Portable Accountant
Type: Business Epson HX-20
System: HX-20 with Microcassette Drive
Required Peripherals: None
Price: $395.00
Ease of Use: The system is easy to use because the various programs follow the pattern of activity involved in the trucking business Performance: Good. It is important to follow the program prompts when changing the tapes.
Documentation: Well written, no previous computer training is necessary.
Summary: This program taps the unique capabilities of the HX-20 to efficiently perform all the functions needed in today's trucking business. This program was written by a trucker, Will Yocom for truckers
Manufacturer:
Motherboard Corp.
110 N. College Ave.
Ft. Collins, CO
80524
303/484-8602

The Trucker's Portable Accountant gathers information and performs calculations as well as printing out business reports. It is intended for use by a trucker on board the cab of a frieghtliner. No previous computing experience is necessary to learn to operate this system of 13 programs. Documentation is excellent and aimed specifically for those uninitiated to the use of computers. This approach to a computerized bookkeeping and accounting system is an entirely new innovation. It was written by Will Yocom, who is an independent trucker. Yocom designed this system for himself and others who operate under their own authority. For under $1000 Yocom is able to save himself a considerable amount more in accounting fees and lost profits. The Truckers Portable Accountant is available through the Motherboard Corporation, and is offered as a complete package, and includes the HX-20 and software for $995.00. The necessary data microcassettes are included with the documentation. The program alone is available for $395.00. This package is unique and epitomizes the inherent usefulness of a microcomputer on the scale of the HX-20. Indeed the HX is in its element, totally portable in a business environment constantly moving from place to place, and providing a much needed computer solution for the long haul business. In use the trucker works primarily from a single page chart of accounts which is secured to the inside cover of the HX-20's carrying case. This provides for quick and easy access. The chart of accounts lists all the possible entries that can be made into the system and under what program any particular item should be entered. Over all the system is easily understood and operated, because the series of programs load and delete each other. This control flow is accomplished according to the need dictated by the day to day pattern of activity involved in the trucking business. The initial program is the Trucker's Accounts Main Menu. This program is loaded from the beginning of the program microcassette. The main menu comes up on the LCD and branches to two choices, those of:

1. Enter Record Data
2. Print Records.

Basically this is all that is involved, the activity of gathering information concerning the trucking business and printing that information in the form of business reports. Calculations are performed by the program to figure expenses and revenues in a per mile format, also totals in dollars are computed. If the first option is selected, (1. Enter Record Data) another menu is viewed listing four options for gathering data:

1. Trip Record and Expense
2. Revenue Truck Management
3. Liabilities
4. Assets.

If data for a trip has already been entered and stored on microcassette then the second option of the main menu may be selected, (2. Print Records) to print data. There are eight report options offered. These eight reports correspond to the chart of accounts mentioned earlier. The printed reports include; Trip Record, Trip Expense, Truck Expense, Revenue, Management Expense, Liabilities, Assets or an Operating Report. The Trucker's Accounts Main Menu program controls the automatic loading of the other twelve programs according to the selection made from the various menus of the main program. The thirteen programs are contained on both sides of one program microcassette. These other special function programs are well endowed with user friendly prompts instructing the trucker to remove or insert the program tape or the various data tapes, and with specific instructions as to which side of the microcassette should be showing when placed into the microcassette drive. It is important to distinguish between the program and data microcassettes. As this system is rather involved, the instructions given

in the prompts must be followed to the letter. If not, and a mistake is made with respect to inserting the wrong data tape or possibly mistaking the single program tape for a data tape, then the result can be the loss of data acquired over weeks or months, the loss of the Truckers Portable Accountant program itself, or both. This is a very real problem and is not necessarily a weakness of the program but is the result of human error. The only real fault of the program itself is in the inability of duplicating the data tapes for back up in the event of such a mishap. The documentation is perfectly clear on this point and instructs care in the use and retention of the printed reports as the only feasible means to provide data backup. This is a sample report produced by the program. This Operating Statement is one of the eight printed report options.

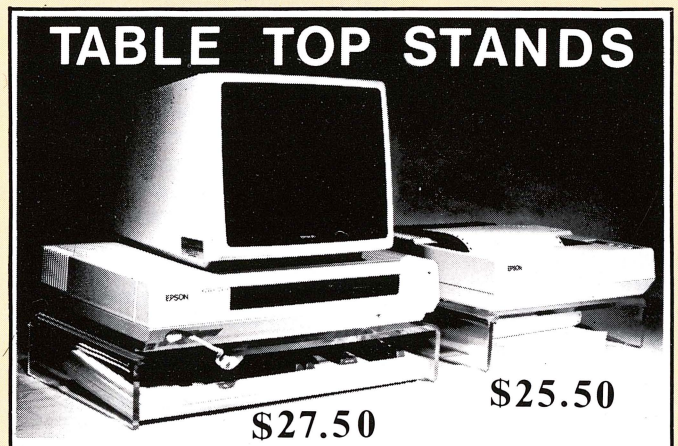
OPERATING STATEMENT

FROM: 9-1-84
TO: 9-29-84

TRIP PAY: FOR 4 TRIPS.	$9800.00
LESS-ADJUST:	$150.00
GROSS PAY:	$9650.00
TOTAL MILES:	11554
LOADED MILES:	11310
97.9% LOADED MILES. FOR 4 TRIPS	
GROSS REVENUE PER MILE: $0.835	
= EXPENSES =	
GAL.TRUCK FUEL Mi.Per GaL: 5.02	2300
CPM = COST PER MILE	
TRUCK FUEL: CPM: $0.212	$2446.00
FOOD: CPM: $0.15	$172.00
TK.SUPPLY: CPM: $0.009	$100.00
TK-TRL.WASH: CPM: $0.003	$40.00
TK.TIRES: CPM: $0.052	$600.00
OFF.& SUPL: CPM: $0.001	$10.00
PHONE: CPM: $0.012	$136.00
TAXES: CPM: $0.028	$328.00
GROSS OPERATING COSTS: CPM: $0.332	$3832.00
OPR.REVENUE: OPR.REVENUE: PER MI: $0.504	$5818.00
INTEREST CHARGES PAID IN THIS REPORT PERIOD:	$786.67
DEPRECIATION COST OF ASSETS DURING REPORT PERIOD:	$1333.33
NET OPERATING INCOME: NET OPR.INCOME: PER Mi: $0.320	$3698.00
PLUS INCREASE IN NET WORTH DUE TO REDUCED LIABILITY:	$666.67
OPERATING PROFIT: FOR REPORT PERIOD LISTED:	$4364.67

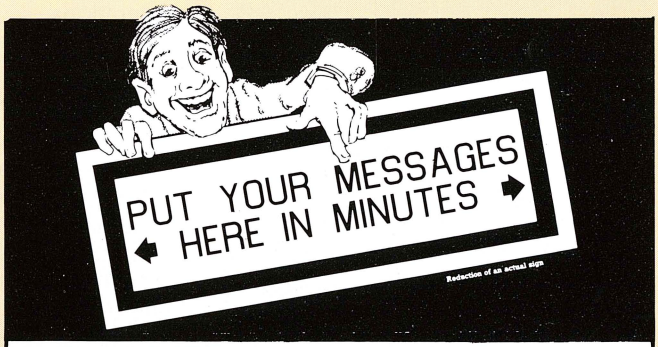
END OF REPORT

This sample report speaks well for itself. The Trucker's Portable Accountant package will become a highly valued asset, and a whole new way of doing business to an owner-operator who trucks under his or her own authority. When considering the potential savings in accounting fees and otherwise lost profits, the system will pay for itself in a short period of time, and then begin earning income by improving efficiency of operations. ■



These custom stands for the QX-10 and Epson printers are made of heavy gauge 3/8 inch clear aclylic with polished edges and non-skid feet. The QX-10's keyboard slides underneath when not in use to protect it and free desk space for other uses. Inserting disks is easier and screen is raised to a better viewing height. Sturdy printer stand provides front or rear access to paper and requires no extra desk space. Available for 80 or 100 series printers (add $3.00 for larger model). Order by mail or phone and pay by check, M.O. or C.O.D. Same day shipment and 20 day return policy. Please add $3.00 per unit for shipping and $1.65 for COD's. MD residents add 5% sales tax. Dealer inquiries invited.

MICRO DESIGNS
13408 Harrison Avenue
Ft Washington, MD 20744
(301) 292-5995



THE BANNER MACHINE PLUS

The Banner Machine™ is an easy-to-use menu-driven program that operates like a word processor. Print signs in minutes for retail businesses, medical offices, schools, or any organization with a need for large, eye-catching signs. Create greetings for celebrations in the home, signs for student elections, and professional-looking reports for school.

- Makes signs up to 10" tall by any length.
- Borders are variable, up to ¾" wide.
- Eight sizes of letters are available from ¾" to 6½" high.
- Additional fonts are available:
  Condensed Gothic, Tombolina, and Holiday Symbols (11 symbols: Christmas tree, Hanukkah Menorah, cross, bell, horn of plenty, heart, shamrock, jack-o-lantern, birthday cake, flower, and star of David.)
- Proportional spacing, automatic centering, right and left justification.
- Standard and Compressed modes of print.
- Inverse print upside down and backwards enables the user to print labels on banners, fold them in half, and hand them over display tables or make name placards for conference tables.
- Reverse printing: the background is black and the letters are the color of the paper used to print the sign. This one is especially attractive using colored paper.

With the QX-10, use the MX with Graftrax or the FX or RX printers.

BANNER MACHINE & FONT 1 **$79.95**
ADDITIONAL FONTS **$19.95** each

ORDER TOLL FREE 10-6 MON-SAT

800-762-5645

Cardinal Software
13646 Jeff Davis Hwy.
Woodbridge, VA 22191

THE IDEA CRAFTSMAN

A Review of Kamas™

by Constance Cumbey

SPEC SPOT

Product: KAMAS™ (Knowledge and Mind Amplification System)
Type: Outline/Idea Processor; Software Programming Tool; Communications Package.
Computers: Currently available for Epson QX10; Kaypro (all models); Morrow MD2; Morrow MD3, and several other CP/M based computers. (Check with manufacturer for availability on specific CP/M based machine.
Operating System: CP/M* (*Trademark of Research Inc.)
Price: $147.00.
Ease of use: While initially difficult to learn, the program is exceptionally easy to use once the terminology is mastered.
Performance: Excellent.
Documentation: Ample documentation and well written. Some sort of summary sheet would enhance the documentation as the user has to wade through many pages to extract the necessary start-up and continuation information.
Summary: An excellent product that the user will not quickly outgrow.
Manufacturer:
Compusophic Systems
Adam Trent, President.
P.O. Box 5549
Aloha, OR 97007
(503)649-3765

Very few pieces of software are indispensable. If you are a writer, planner, programmer or organizer of any type; however, KAMAS is.

The authors describe KAMAS as an "intellectual lever — a mind amplifier." Whether it "leverages" anything that wasn't already there is debatable. However, it will certainly help access what is already there, whether it puts anything new there or not. If you are a writer suffering from a terminal case of "writer's block", KAMAS will come to the rescue by forcing a hierarchical structuring of your ideas. It will prevent scattered writing by refusing to accept duplicate titles in its outline processor — the heart of the KAMAS operations.

Kamas Features

KAMAS is a menu driven program. After invoking the program by typing "KAMAS" you then traverse the program by using its "ROVE" command. Typing a simple "?" will present you with a series of menu and help menu choices, if at any point during the operation you find your flexibility hampered by lack of knowledge.

KAMAS doubles as a topic management system and a programming language. In fact, the program was written largely using its own language. There is no need to know programming to use the Outline processing. That feature is self-contained. However, programmers will undoubtedly find the outline processing feature a helpful aid in program construction.

Outline Processing

Outline processing has been available to PC/MS-DOS system users for some time now. THINKTANK and Ashton-Tate's FRAMEWORK come immediately to mind. However, it has now come into its own for the CP/M user. I was impressed, upon opening the review package, to note that the instructions were clear and up-to-date for installation on the new CP/M-B 2.20 operating system for the Epson. CP/M users of Epson and similar systems now have a further advantage over the MS/DOS and PC/DOS users in that while copyrighted, KAMAS is not copy-protected, and you do not have to experience the paranoia of THINKTANK and FRAMEWORK operators who must boot up their only copy of the factory disk, EVEN TO RUN THEIR HARD DISKS! This is an important point to me. I have experienced the frustration of investing in IBM compatibility additions to my Epson and purchasing the more costly software, only to find that I was obliged to use my factory disk — a real "no-no" from my earliest days of computer use.

KAMAS DOUBLES AS A TOPIC MANAGEMENT SYSTEM

"LEAF EDITOR" - For Expanding Ideas

Once you have developed your basic outline, or even before you have developed it for that matter, you may run across that perfect piece of documentation for your book or article. No problem with KAMAS. You merely go to the proper place in your outline and invoke the "LEAF EDITOR". This process is described below. Insto-Presto, you have saved

your relevant material and do not have to depend on either your memory or your organizational skills (woefully lacking in most researchers and writers!) to tell you to insert this material later. The job is done!

Communications Package KAMASBBS

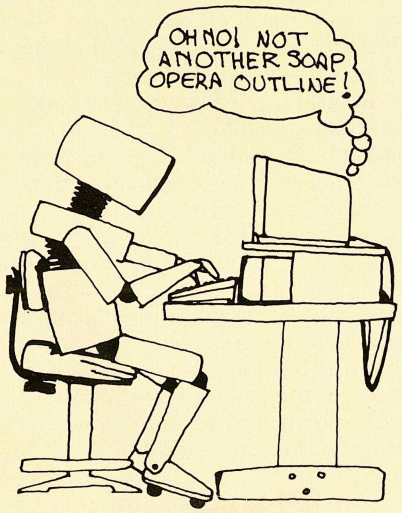
KAMAS purchasers also receive access to their own bulletin board service — KAMASBBS (KAMAS Bulletin Board System). One of the EPSON CONNECTION Sysops will write more about the specifics of this feature in a later issue.

Programming Tool

KAMAS serves as a programming tool. Adam Trent and Anne Hickman have provided excellent documentation for this feature. KAMAS also functions as a high-level language for programming needs and you have the capacity to create your own vocabulary — a form of artificial intelligence so to speak.

Steps in Outline Processing

Since the most common use of KAMAS will probably be outline processing, the following steps might help the first-time user make it through the maze of thick documentation (hundreds of pages worth) and esoteric lore of dubious value included along with the operating instructions. Once you have absorbed the basic techniques, you will appreciate the detailed documentation KAMAS provides (but I have never appreciated the included esotericism, a la Arthur Koestler, et al).



1. Invoke KAMAS by typing "KAMAS".
2. You will then receive a "ROVE" prompt. At Rove prompt type "T" (for TENV, KAMASese for "TOPIC ENVIRONMENT"). At the TENV prompt type "P" (for "preparation"). Decide your size (8 K to 8000 K depending on your disk capacity) — and be generous. There are procedures for topic size expansion, but they are complex for the novice. Once forgotten ideas surface with the speedy recapture of the outlining process, you will find that your topic will grow much faster than you initially thought possible!
3. Name your topic. Your name is not limited by CP/M conventions, but remember you will have to type it every time with exactitude to recall it, so keep it as brief and easy to remember as possible!
4. You will then receive another ROVE prompt. At this prompt type "E" and receive an "EDIT" prompt. At this prompt type O and receive an "Outline" prompt.
5. **IMPORTANT!** Once you have a created a topic on your data disk, do not change diskettes without properly exiting the KAMAS program. Exiting is done by typing ESC twice to CP/M.
6. After exiting KAMAS, you may recall your topic by typing "T" in response to the ROVE prompt and thereafter in response to the "Topic" prompt, type "B" (mnemonic for "build"). You will then receive another ROVE prompt at which time you will type "E" and then again "O" to re-enter your outline.
7. You may then begin to name your titles — one at a time. This is done by typing "I" at which time you will receive an "INSERT" prompt. You will be asked whether you wish to insert "N"(next) or "DOWN". The title and the subtitle are referred to in KAMAS vernacular as "Keys". The title is mandatory, the subtitle is not. The title may consist of up to 31 characters and the subtitle another 63. Unless you want the title and subtitle to run together, separate them by a space and a dash. You may not use duplicate titles. If you do you will receive an error (ABEND — short for "abnormal ending") message and be told to retry.
8. You may expand on your topic and insert text inspiration by selecting the L (Leaf) option at any particular key (title). At that title, type "E" and receive an edit prompt with a Title/Leaf option. Select L for "leaf" and you will then be placed on a blank page that will contain up to 2420 characters. If you exceed that, follow screen instructions for help in splitting your leaf. Screen editing uses Perfect Writer conventions and has limited formatting abilities.

All in all, KAMAS is a most important tool for the budding writer, attorney, and planner. Its uses are plenteous. It is initially a difficult program to learn. Patience is required for absorbing the bulky documentation. I strongly feel that some of its more esoteric features being unnecessary — i.e. "Zen and the Art of Information Processing" — I have never figured out what going into a trance had to do with the more efficient running of one's personal computer! Be that as it may, Adam Trent obviously was not in a trance when he designed KAMAS. I can personally attest to its efficacy as a idea processing tool. As an author myself, I had an advanced case of Writer's Block when I encountered the KAMAS program. I had lots of ideas and documentation, but could do little to put it all together - or even get started. With the help of KAMAS, that problem was overcome and I made more progress in two weeks than I had in the previous 12 months. Now my agent is happy, my publisher is happy, and my family is happy, and

I CAN ATTEST TO ITS EFFICACY AS AN IDEA PROCESSING TOOL

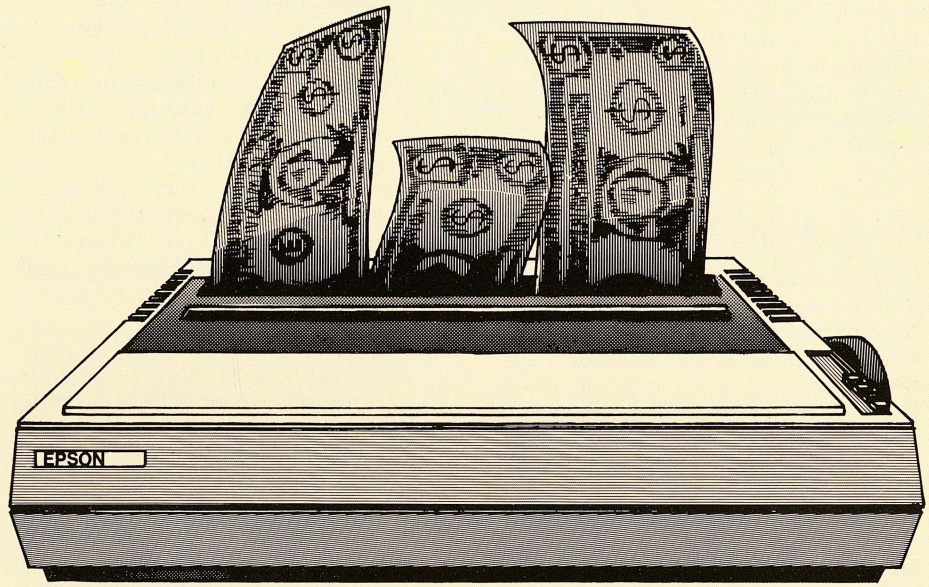
I am not nearly so intimidated by the prospect of writing my next book, or even by the prospect of writing a brief, should I become burned out writing books and ever decide to return to the active practice of law.

Constance Cumbey is a Christian attorney, author of "The Hidden Dangers of the Rainbow" and QX-10 owner. ■

STOCKCHIP

THE COMPUTER BROKER

by Larry Hufty



SPEC SPOT

Product: STOCKCHIP
Type: Portfolio Manager
Computer: QX-10
Operating System: CP/M version 2.2
Required Peripheral: 80 or 132 column printer with either parallel or serial interface.
Price: $149
Ease of Use: Excellent
Documentation: Well written
Summary: A comprehensive Portfolio Management Program for the relatively experienced investor
Manufacturer:
Stanton Software
Box 28762
St. Louis, Missouri 63146
Phone: 314-576-7482

In recent years, the IRS's demand for documentation from investors has grown and many investors are turning to portfolio management programs as a way to record their transactions.

Users of portfolio management programs generally fall into three categories: the professional investment manager, stockbrokers, and the individual investor. I would further break the individual investor into three categories: the serious investor, the relatively experienced investor, and the casual investor. *StockChip* does a fabulous job of filling the needs of both the experienced and casual investor. Due to a lack of several items which I will go into later, *StockChip* cannot adequately fill the needs of the serious investor.

The individual investor that *StockChip* can assist has limited needs from a portfolio management program. These needs are centered around a record keeping and monitoring system of an equity portfolio that is easy to use, yet able to provide reliable information. This program should be able to generate statements to give an idea of total worth at any point in time, and be able to print these statements. Those are the main functions any portfolio management program should be able to do. *StockChip* goes far beyond the basic criteria, and provides an impressive list of functions for a $149 portfolio management program. According to a recent survey by the American Association of Microcomputer Investors, Inc (AAMI), an independent non-profit organization in Princeton, N.J., the average price for a portfolio management program is $405. The survey excluded packages that were priced over $2500 to prevent an upward influence on the average price.

SPECIFICS

StockChip utilizes an easy to use menu-driven program. The menu consists of 14 options, and comes with a sample portfolio to learn on. Each of the 14 sections is loaded with question statements to lead you through proper execution of your transactions. It is nearly impossible to make a mistake. But, should you make a mistake, one of the sections will allow you to correct it. The following paragraphs will summarize each of the 14 sections and their interactions:

Record a Stock Purchase. This seems straight forward enough, yet *StockChip* gives you capabilities here that some of the $500 programs don't provide, like the capability to store up to 300 different stocks in your portfolio — an impressive number in anyones portfolio. *StockChip* will list your stock by both symbol and title. Then, to take advantage of the Public Utility Qualified Re-investment Dividend Program, you are asked if your stock qualifies. Next listed is the principle exchange the stock trades on. After entering the date, number of shares, and price per share, *StockChip* will ask for the commission paid. This is an extremely important tool for several reasons, the most important being that the IRS says we must maintain a record of commissions paid. Once all data is entered, the screen blanks, and a break-down of the purchase appears, with the option of making corrections.

Continued on following page

Record a Stock Sale. In this section, the sale of an entire holding or part of a holding takes place. *StockChip* will even determine if it is a long or short term gain or loss. (The most recent update to *StockChip* takes into account the new 6 month long term gain, which began June 30, 1984). As with the buy, commissions are recorded for you. I mention this again because many of the people I talked to that use portfolio managers complained that their particular program did not. Basically, they have a program that does *almost* all of the bookkeeping. I was impressed by all of the built in questions throughout the program. Not once did the program lead me astray.

Record a Stock Split. What do you do when all of a sudden your 100 shares of ABC becomes 200 shares? With *StockChip*, it is as easy as a buy or sale. Once again, the question and answer format makes this entry extremely easy.

Record a Dividend. This type of transaction is more difficult than most because of the Utility Dividend Re-investing Act. Yet, with the extensive question and answer format, it is no problem. You are able to record which percentage or amount of your dividend is return of capital and which is Nontaxable. You are also able to distinguish between a cash dividend and a stock dividend. Since dividends can be given in several different ways, (such as part cash, part stock, all stock, etc.) it is imperative that any stock portfolio management program be able to handle each type. Once again, *StockChip* comes through with flying colors.

Erase a Stock or Erase the Entire Stock field. This section is self explanatory. Throughout the program, you are given chances to answer the question "ARE YOU SURE?" Sometimes I felt the authors went overboard with the checks and double checks, but in the case of erasing an entire stock, the authors make sure you know what you are doing before the program continues.

Change or Delete a Previously Filed Entry. Occasionally a stock name will change, the primary exchange will change, etc. *StockChip* gives you the opportunity to update your files. An important feature of this section is that you can add to or change the non-taxable portion of a dividend entry. This section also has the ability to change the amount you have excluded on a public utility re-investment dividend. This is critical since frequently a public utility does not know until months or even years later how much of a dividend will be declared as nontaxable. Another important feature is the ability to go back and add an adjustment check regarding a "stock dividend" or "stock split". Finally, this section allows you to delete the last entry on a stock, a feature I find extremely helpful. This entire section is sub-menu driven for ease of operation.

View the Symbols and Names of all the Stocks you are Currently Holding. This is self explanatory.

View Symbols & Final Profit/Loss for all Sold Off Stocks. This feature only displays those stocks for which you no longer have a position in, yet are maintaining a record of buys and sells.

Check on the Current Value of one of your Stocks. Once you enter the stock symbol and price, you receive a table of the stock and its worth. Here the authors got a little carried away. The table not only gives the value of your holding in a particular stock, but also tells you how much it is worth to you if you sold it. The problem is that they are using a commission rate from "a leading Discount Brokerage Firm", which is fine if you are using a discount firm. If they felt it was necessary to put this bit of information in, I feel you should be given a choice between the rates of a leading discount firm and those of a leading full service firm. Otherwise, this is a very helpful section.

Summarize all Cash Dividends for a Particular Year. This section allows you to quickly view all of your cash dividends paid for any tax year you select. Here is where *StockChip* begins to shine. Once you have picked your stock to view, you are given the option of viewing it on either the screen or sending it to the printer. A small feature, but one that many portfolio programs do not allow for.

Summarize the Activity on a Stock & Calculate its Profit/Loss Position. This section will give you a complete audit trail of the transactions on a particular stock and then to translate this information into an actual "bottom line" profit/loss for you. Everything is taken into account, including actual commissions, dividends, splits, etc. And once again, once it has been viewed on screen, you can send it to the printer.

Calculate Profit/Loss Position of Entire Stock Portfolio. This feature gives you the current portfolio's value, total shares remaining and the portfolio's "bottom line" after accounting for all splits, sales, etc. Each stock you are holding is individually listed, and of course, you may view it on screen or print it.

Calculate the Values for a Hypothetical Buy or Sell. This section is quite useful, although limited by their use of a typical discount brokerage firm commission rate. It can help you determine a target amount to sell to produce a certain profit/loss.

Calculate IRS Schedule D Entries (actual and/or projected). This section alone makes it all worth the $149. You can generate a complete IRS Schedule D, ready to attach to your income tax return. And there is no need to transpose the figures to the IRS form, as the columns line up identically with the IRS Schedule D. Consequently, the IRS will gladly accept your *StockChip* generated Schedule D! The other part of this section is to generate a projected Schedule D. This comes in handy when trying to balance out a winner with a loser for tax purposes. *StockChip* will help you decide which avenue will be the most profitable for you.

OBSERVATIONS

At the beginning of this report I said that *StockChip* was not for the serious investor. A portfolio management program for the serious investor should contain:

- — reporting and record keeping capabilities
- — maintenance of current equities and bonds, as well as cash and other investments such as options
- — automatic dial up to any one of the stock market databases (such as Dow Jones) for current evaluation of stocks held
- — calculation of unrealized capital gains and losses
- — maturity and dividend tracking of bonds
- — directory and ticker symbol tracking of equities in the portfolio.

Continued on page 36

Punctuation

A CP/M Application by Franc La Clair

SPEC SPOT

Product: "Punctuation" + Style: Punctuation Checking and Writing Improvement Software
Computer: Epson QX-10
Specification: CP/M "A" or "B", TPM
Price: Suggested Retail Price $99.95
Ease of Use: Very Good
Performance: Excellent
Documentation: Good
Summary: This one disk product significantly improves punctuation and phrasing for most documents while remaining flexible and easy to use for the consumer. Documentation is clearly written although contains errors that may have been corrected with the use of "Punctuation and Style", and a spelling checker.
Manufacturer:
Oasis Systems
2765 Reynard Way
San Diego, CA 92103

I recently had an opportunity to use and evaluate "Punctuation" + Style on a few documents I had written. Just imagine my ambivalence when I discovered a software package that pointed out verbosity, grandiosity, pomposity, and all my bad habits as a writer!

Two basic programs are involved in proofing documents with "Punctuation" + Style, which runs on the Epson QX-10 under either CP/M "A" or "B". CLEANUP.COM proofreads documents for punctuation errors. CLEANUP.COM uses three other files to accomplish this, CLEANUP.OPT, ABBREVS.TXT, and CAPSEX.TXT, which when used in this section of the proofreading, checks for inaccurate or missing punctuation involving periods, commas, colons, semicolons, question marks, ellipsis, exclamation points, hyphens, and quotation marks, as well as common abbreviation, and words normally capitalized.

Once checked for errors, the program provides three options for each error identified, M>ark, I>gnore, and Q>uit. An error message describing each marked and numbered error appears at the bottom of the screen.

PHRASE.COM, along with PHRASE.OPT, PATTERNS.TXT, and PASSIVE.TXT comprise the second section of the proofreading program. These programs evaluate writing style and produce error messages as "suggestions" for each identified word or phrase. Four options exist for this section, M>ark, I>gnore, P>rint, and S>uppress sentence.

Both programs mark your document and automatically save the original as a .BAK file. PHRASE.COM and CLEANUP.COM allow the option of presenting "suggestions" either at the end of the paragraph, or within the sentence. Phrases and words are marked with brackets [ ] by PHRASE.COM, and punctuation errors are marked either by an @1, @2 etc., or by a character defined by the user.

"Punctuation" + Style has several "switches" that may be toggled by the user to "customize" program operation. By typing CLEANUP B: ARTICLE.DOC $QM#, the user is telling the punctuation program to proofread the file ARTICLE.DOC on the "B:" drive, and automatically mark all punctuation errors without user input, with a # character.

Although the User's Manual is only 90 pages, it adequately covers the setup and use of the program. Several appendices are provided as explanation of how the programs check for errors, and as crash tutorials on writing style.

Appendix and C tell the user how to "build" a custom .OPT file to recognize control characters used with specific wordprocessors. "Punctuation" + Style defaults to WordStar, but works with several other popular programs including PeachText (Series 9 and 5000), Spellbinder, and Perfect Writer. A shortcoming of "Punctuation" + Style is the lack of practice or example documents on disk. Several examples are shown in the User's Manual, but it would be helpful if a couple of small files were on the disk to practice with, and there is plenty of room on the disk.

Punctuation & Style is a well conceived and documented program with good error handling.

"Punctuation" + Style is a well conceived and documented program with good error handling. It is easy to install on the QX-10 for use with several popular wordprocessing programs including WordStar and PeachText. A person that does even a moderate amount of writing will want to add this to their library of frequently used programs. PeachText (my favorite) with the Random House Thesaurus and Spelling Checker, and used with "Punctuation" + Style, provide a winning combination to improve your writing. ■

and Style

A Valdocs Application by William N. Coxe, Jr.

This review is going to be hard for me to write, I was so wrong about my initial impressions. These are, it turns out, truly wonderful products.

The Word Plus and Punctuation and Style are wonderful.

Have you ever had one of those days that just turned out to be a terrible month long. That's how all this started out. I ordered Punctuation and Style (P&S) in a big hurry by going through the magazines and selecting a dealer by his promised shipping date. "Yep, 5 days to ship a QX-10 version, guaranteed." Dummy that I am, after two weeks I realized I had forgotten which dealer I had ordered from. Two months later it arrived, labeled QX-10, but with absolutely NO instructions on how to set it up to use with ValDocs Series One software and NO warranty card.

I read the manual, which was clearly designed for things like WordStar and Perfect Writer. Not ValDocs. There was a setup procedure for "Other," which I selected by process of elimination.

Punctuation and Style is no simple program.

Punctuation and Style is no simple program. It has many sub-parts to it. Some of them look for some pretty esoteric things, such as mis-matched characters and control characters. Boy, the first few times I used it I found so many odd control characters I was sick. ValDocs documents are full of them, and every one of them ended up marked as an error. It was terrible. This was supposed to be a QX-10 version, right?

Well, to make a long story short, I finally figured out that, by digging out my copy of WordStar and editing a "non-document" file on the P&S disk called OTHER.CL, and then renaming it to CLEANUP.OPT, I could bypass all those control characters and only mark real errors. The same thing goes for OTHER.PH, which is renamed to PHRASE.OPT.

The finished files should be edited to look like these, below. The # represents a completely blank line in that particular file. I show them ONLY to make it easier to read this article. **Do NOT include the # or the words in parenthesis in your files.** Be careful, don't accidentally insert blank spaces or work on the files with the INSERT key on. Also, the numerals are not visible, but are used here just to show line numbers:

	CLEANUP.OPT	PHRASE.OPT
1.	F	#
2.	#	' (apostrophe)
3.	:: (justification)	#
4.	#	[(marker)
5.	#	]
6.	#	@ (marker)
7.	=	cMcJ (CR & Line Feed)
8.	@ (marker)	=
9.	cMcJ	80
10.	#	#
11.	c[(CTRL [or ESC)	#
12.	c / (CTRL /)	#

Once you have these files setup properly you can run P&S from ValDocs' MENU if you select "Applications" and "Left" Drive.

However, as it turns out, The Word Plus (TW+) spelling checker will NOT run properly from ValDocs. After many trials using every method I could think of, I finally just made a bootable CP/M B2.20 disk, including CPM2.SYS and put both TW+ and P&S on it. That works.

Now, when I finish storing my ValDocs document I note the numbers on the right of the index which tell me the CP/M file name (02/01/85:003 translates to B:85201003.VAL) that I must use with TW+ and P&S. Then, I change disks by doing a CTRL M, C, remove the LEFT (ValDocs system) disk and replace it with the bootable CP/M disk. Then I RESET.

After CP/M boots, enter TW and the file name, such as: TW B:85201003.VAL (NOTE: You must include the B: to tell the programs that your document is on the B: drive, and the .VAL to tell it that it is a ValDocs file.).

TW+ runs unmodified with ValDocs documents. However, you will find words which you will know are correct, such as your own name, that were marked as errors. You can eliminate this problem by entering your name, street, city, etc., into the UPDATE.DICTIONARY when you encounter them. Be careful what you enter. If you enter a word which is incorrectly spelled the program will then think it is correct and let it slip by next time.

TW+ will allow you to correct your document file while viewing the context of the "error," if you wish, and it can actually look up words in its dictionary and make suggestions. These features are remarkably useful and more than make up for the long initial processing. I find that TW+

ends up being faster and more accurate than several other dictionaries I have used once I consider the time saved because of the context and look up features.

One thing which must be noted is that when words are corrected which change the length of a line, TW+ will warn you and then you must go back and use ValDocs to reform (CTRL Q, F) the document. If you do not reform you will have odd line lengths when you print.

Next, enter CLEANUP B:85201003.VAL. This program checks for such things as double double words, mixed upper and lower case letters (ValDocs), unbalanced (only one of a pair) quotes or brackets, and several other problems. Although I doubted the usefulness of this program, at first, it has become a favorite. It improves the appearance of my documents immensely and finds things that no spelling checker ever finds. It can be customized further by entering special marking, spellings and odd words into a special file.

Typing PHRASE B:85201003.Val will run a program which checks for poor usage of the English language. It tells me that I use the words "Nice" and "Very" too much. On reflection, it is correct. I sometimes ignore its advice, but I always read its suggestions and make a conscious decision, first.

All in all, I have found TW+, and P&S to be remarkable programs. I would hate to be without them. None-the-less, there are a few things I would like to change about them. Among them are internal inconsistencies. In P&S, when you want to "Ignore" something it points out, you enter "I" and go to the next item. However, in TW+, to ignore a word it thinks is misspelled you have to enter a "D" for DISCARD.

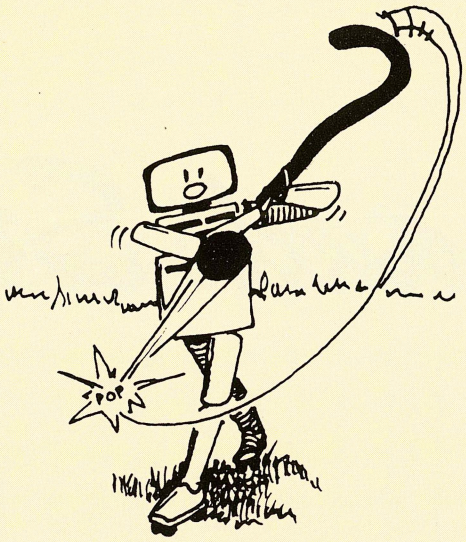
"Discard," of all things! The first time I saw that I thought it meant it was going to throw it away; just remove it entirely. Well, you get used to it, but I find myself trying to enter an "I" in TW+ where a "D" should be. It is confusing, to say the least. I wish it were consistent with P&S.

TW+ comes with a few interesting bonus programs. Do you do anagrams or crossword puzzles? If so, these are fabulous "cheating" aids. They can hunt up words, do combinations, all sorts of things. If you want to alphabetize a list of words, or count the words in a document, or see how many "Unique" words are in a document, you can pick a program and away you go. All very nicely packaged. I recommend that you test them on duplicate files, as some of them change the originals.

One thing that is sorely lacking is a program, commonly called a FLESCH analysis, which will tell you the "Grade," or "Reading" level of your text. Several of the newer programs have this feature and for professional writers it is invaluable. I would like to see it part of the spell checker defaults.

My final words on The Word Plus and Punctuation and Style are that they are wonderful. I do wish that they were more internally consistent, that they actually came setup for ValDocs, that they all would run from within ValDocs, and that TW+ had the Flesch analysis, was a bit faster on the front end and that it had a much larger dictionary. I also wish that I had bought them eighteen months earlier, because I love them even as they are. ■

I wish I had bought them eighteen months earlier.



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HARDWARE & SOFTWARE FOR THE QX, HX and PX

DESKMASTER 6

by David Cristovitch

SPEC SPOT

Product: DESKMASTER-6
Type: Decision-making utility
Computer: HX-20 with Microcassette Drive.
Required Peripherals: None.
Price: 19.50 pounds (approx. $30.00).
Ease of Use: Menu-driven, easy to learn.
Performance: Good.
Documentation: Concise but generally clear.
Summary: Helpful tool for reaching simple or complex decisions.
Manufacturer:
Kuma Computers Limited
11 York Road
Maidenhead, Berkshire, England

Most of us, when faced with an important decision, struggle to approach the problem objectively by concentrating on the facts. Realizing that the most objective decision will not necessarily be the one we would personally prefer, we may under- or overcompensate for our personal biases. Seeking the advice of others is not always feasible, especially if the decision is of a personal or business nature. In such cases, the unfailing objectivity of a computer can be invaluable. The DESKMASTER-6 decision-making program from Kuma Computers Limited lets you use your HX-20 to compare alternatives against each other numerically according to the specific criteria you select, and helps you reach the right decision.

DESKMASTER-6 is a 5.5K program, supplied on a microcassette and written in BASIC. It allows you to quantitatively weigh and compare up to seven alternatives or options. After loading the program in the usual manner, you work from a series of menus. The menus guide you through the process of entering: your options, evaluation criteria, and the relative weight and importance of the different criteria to be used.

Once your data is in place, you can order three reports on the microprinter. The report presents your alternatives relative to each other in matrix form and provide quantitative cross-evaluations. The "Concordance" matrix shows you how well each option scores relative to the other options and against your weighted criteria. The "Discordance" matrix reveals how far each option falls short of each other option. The "Outranking" matrix provides your "bottom line" of which options beat the others. There is a PRINT DATA command which will send all your raw input data to the microprinter for recordkeeping purposes. A convenient EXIT command sends you back to BASIC. The four error messages displayed by the program are concisely but clearly explained in the documentation.

DESCRIPTION OF DESKMASTER-6 PRINTOUT

The printout of DESKMASTER-6 shows the results, for instance, to decide which computer to buy: an HX-20, an "80," a "PC," a "MC" or a "KA". The Concordance matrix shows the HX-20 scoring highly against the stipulated criteria; the Discordance matrix shows that, of the candidate machines, the HX-20 deviates the least from ideal; and the outranking matrix shows that, with all factors taken into account, the HX-20 outscores the other candidates. The outranking also shows the "80" beating the "PC", the "MC" rated over the "80" and the "PC", and the "KA" outscoring the "80". When the PRINT DATA command is used, the following raw input data items are sent to the microprinter:

1. The option names used.
2. The number of criteria used for judging the options.
3. The "classes" (or number of numerical breakpoints) for the evaluation table specified for each criterion — in this case, the program's default table of 1 through 10.
4. The specified criteria and the weight assigned to each by the user.
5. The concordance and discordance thresholds (or breakpoints) specified by the user.
6. The scores assigned by the user to each option against each criterion.

I found the best feature of DESKMASTER-6 to be its ease of use. The menu structure and logical prompt sequences are helpful, and the documentation (though brief at five pages) is clear and easy to follow. A sample run is provided in the documentation, and following it teaches you all the basics you will need to use the program effectively. I liked the opinion for re-entering the data for any single category in the menu and instantly recalculating the results. After a few trial runs, I was able to evaluate seven alternatives against ten criteria (the maximum allowable number of criteria is twenty) in under ten minutes. The only significant burden which DESKMASTER-6 places on the user is the need to conscientiously think through your options and criteria; thus, it can be said that the program forces you to do that which you SHOULD do in reasoning toward a decision, and performs the number-crunching as a bonus. The HX-20's built-in display is adequate

for the program's prompting, and you can use the back-arrow key to change your input before hitting RETURN. In future releases of DESKMASTER-6 (the version I tested was 1.10), I hope that Kuma will implement a SAVE feature so that you can save an input data file on the microcassette. This would let you input data and see the preliminary results, save the file and sleep on the problem for a night or two, and then reload the file for tinkering. Currently you have to re-enter the data from scratch. Also, the two-character code allowed for each option is a bit confining,but then so is the HX-20's display, so we may have to live with this minor annoyance. The limited width of the microprinter causes minor readability and format problems when triple figures are printed in the matrices, but again, there's little Kuma can do about this short of redesigning the hardware. In any case, most BASIC hackers will be able to reformat the program's prompts and printouts to suit their preferences. A fuller explanation in the manual of the "classes" one must define in order to create special evaluation tables would be welcome, although this matter clarifies itself after a few trial runs.

In summary, Kuma's DESKMASTER-6 is a creative and well-crafted software tool whose utility and ease of use far overshadow its minor faults. It's been said that the highest and best use of a computer is to exponentiate the user's reasoning power in the same way that a lever exponentiates the user's lifting power. I consider DESKMASTER-6 a good implementation of this concept. The program's price of approximately $30.00 (depending on the current exchange rate between the dollar and the British pound) seems quite reasonable when you consider how expensive a bad decision can be these days. ■

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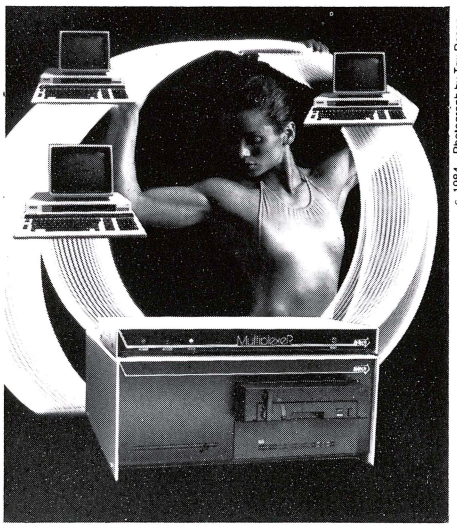

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FINANCE LIBRARY

by Ronald Pratt

SPEC SPOT

Product: Business Finance Library
Type: Business Programs
Computers: HX-20/ Geneva PX-8 (microcassette tape with HX-20 version on one side and PX-8 version on the other); HX-20 version used in this review.
Required Peripherals: None, although output may be directed to an external printer. The Geneva version requires a printer for output.
Price: $75
Ease of Use: Good
Performance: Good
Documentation: Excellent
Summary: Easy to use business applications for the portable computer user.
Manufacturer:
American Micro Products, Inc.
705 North Bowser
Richardson, TX 75081

The Business Finance Library consists of eight programs on microcassette, and is designed to aid the businessman in such areas as: Annuities, Rent or Buy Decisions, Cash Flow Analysis, Bond Analysis, Machine Replacement Analysis, Days Between Dates, Depreciation, and Portfolio Analysis. It comes complete with a well designed, easy to use reference manual laid out in a spiral ring style with horizontal print for easy access.

The manual systematically presents an overview of all eight programs. Each program is accompanied by an introduction describing the formula it incorporates and a brief explanation of all the variables in the formula. An easy to follow, step by step example on how to use each program is included. Program discussions include charts that detail the workings of the program theory. A complete discussion of HX-20 operations is included, so those unfamiliar with the computer can immediately start using the programs. The manual also has an appendix which explains business terms and a suggested reading list of business-related books.

The programs do have one major weakness. They do not take full advantage of the HX-20's graphics capability to display an impressive print out on the LCD or on the micro printer. Also, in most cases only 40 of possible 80 columns are used on an external printer.

Using Annuities

The programs are all easy to use. Load them from the micro cassette and type in "run". Screen prompts will display the program copyright followed by the instruction to press "return". You are then asked to choose a printer option. The printer choices are: display, micro printer, or external printer. Once this operation is completed, you are then asked to choose between four items: present value, future value, payment, or annual interest rate including the number of payment periods.

In the example given, we are purchasing a new pick-up truck to be used for business purposes and intend to pay for it over a 36 month period. The price of the truck is $12,000 with an annual interest rate of 10.2%. The future value of the truck will be $0.00. The example then instructs us to choose "for payment". The next prompt asks for the present value, at which point we enter "$12,000", then it asks for the future value, enter "0". Next, the prompt asks for the annual interest rate, enter "10.2", and finally, the prompt asks for the number of periods; enter "36", representing 36 payments. Once the data has been entered you are asked if you want to edit it. If the answer is yes, you are taken back through the above sequence and any or all data can be changed. If your answer is "NO" the next stage of the calculation process begins. You are asked if you want an amortization schedule (Y/N), and you may also choose what month you wish to start and end the table. Once again you are asked if you want to "edit", if you answer no, the payment schedule is at once printed out. Finally, you are asked if you want to exit from the program; if not, it returns to the main part of the program for additional data. The print out includes data for each period, the principal, interest and balance. All eight programs use similar screen formats and prompts.

The Rent or Buy Decision program covers the cost advantage of buying a house as an investment in relation to renting and placing the extra money into another investment. Some of the factors to be considered in the decision-making process are: total price of the house, amount of down payment, mortgage interest rate, term of mortgage, years of house occupancy, appreciation of the house, commission charges to sell the house, closing costs, marginal income tax rates, monthly property taxes, monthly cost of maintenance and insurance, monthly rent, and bank interest.

The remaining six programs are listed below with a brief explanation of what they do:

1) **Cash Flow Analysis Program** calculates either the net present value or financial management rate of return on cash flow.
2) **Bond Analysis** calculates accrued interest, price, and/or yield of a bond.
3) **Machine Replacement Analysis** compares the average net expenses for a new machine to the cost of replacement of an old machine, & the more advantageous approach is given (before taxes).
4) **Days between Dates** calculates the number of days between dates, and the day of week for a specific date.
5) **Depreciation** calculates one of three methods to depreciate an asset over time; partial years are also considered.
6) **Portfolio Analysis** calculates maximized returns on minimized risks for a given portfolio, based on known rates of return.

In conclusion, I would highly recommend this library of business related programs to any businessman. As mentioned earlier, I do feel that there could have been a provision to use the full capabilities of the HX-20, such as the graphics, and perhaps better use of the external 80 column printer. Some provisions should have been incorporated for storing data on microcassette tape for use at a later date. ■

MINI-CALC A Beginner's

SPEC SPOT

Program name: MINICALC
Program type: Application
Computer: QX-10
Operating system: CP/M or TPM

About a year ago, I decided to sit down and take a couple of afternoons to learn how to use the PeachCalc Spreadsheet program on a QX-10. I wanted to find out for myself what all the fuss was about with these "electronic spreadsheets." After reading about half of the manual and running most of the demo programs that came with it, I then realized the power and versatility of a spreadsheet.

Since I am an avid programmer, I decided to test my programming skills by writing a small spreadsheet program for the TRS-80 I had at home. I knew of no spreadsheet program that worked with tape storage for my machine, and besides, I like challenges.

What I came up with was a program that carried much of the basic characteristics of PeachCalc. Nowhere near the power or versatility, but the basic functions. It had most of the functions that I'd ever need. Since the Model I's screen is only 64x16, I managed to squeeze in a 10x10 matrix, or, a spreadsheet with 100 cells. You could store text, numbers, very brief formulas (only one function per formula), add, subtract, multiply, divide, exponentiation, and of course, add rows and columns. It also allowed me to save and retrieve the spreadsheet data to my cassette tape, and print the spreadsheet to the printer, all in a 6k program!

After learning all the in's and out's of MBASIC on the QX-10, I decided to see if my program could work on it. I thought it would be impossible, but then discovered how to manipulate and address the screen from MBASIC.

```
10 REM ***** MINI-CALC
20 REM ***** A SPREADSHEET PROGRAM BY ALLEN HOWELL
30 PRINT CHR$(26):PRINT:PRINT:PRINT:PRINT:PRINT TAB(32);"MINI-CALC"
40 PRINT:PRINT:PRINT:PRINT TAB(29);"By: Allen Howell"
50 PRINT:PRINT:PRINT:PRINT TAB(33);"<1> CP/M":PRINT TAB(33);"<2> TPM"
60 FLO$=CHR$(27)+CHR$(94):FLF$=CHR$(27)+CHR$(113):WIDTH 255
70 PRINT:PRINT TAB(23);"Which SYSTEM are you using";:INPUT A$:IF A$="2"
THEN 90
80 UP=11:DOWN=10:LEFT=8:RIGHT=12:NREV=-1:GOTO 100 'CP/M cursor codes
90 LEFT=29:RIGHT=30:UP=28:DOWN=31' TPM cursor codes
95 'UP=156:LEFT=157:RIGHT=158:DOWN=159 'Use only if compiling for TPM
100 BEEP$=CHR$(7):BAK$=CHR$(8)+" "+CHR$(8):BAK=127:IF TPM THEN LEFT=29:RIGHT=
30:UP=28:DOWN=31
110 DEF FNPC$(R,C)=CHR$(27)+"="+CHR$(R+31)+CHR$(C+31)
120 PRINT:PRINT:PRINT:PRINT:PRINT TAB(25);"Enter '?' for Instructions";
130 A$=INKEY$:IF A$="" THEN 130
140 IF A$="?" THEN 1750
150 DIM A$(20,12),F$(20,12),F1$(6)
160 F1$(1)="+":F1$(2)="-":F1$(3)="*":F1$(4)="/":F1$(5)="^":F1$(6)=":"
170 REM ********** Set up screen **********
180 PRINT CHR$(26);:PRINT"   ";
190 FOR I=1 TO 12
200 PRINT CHR$(233);"  ";CHR$(64+I);"  ";
210 NEXT I
220 PRINT CHR$(233)
230 FOR I=1 TO 20
240 PRINT STR$(I);TAB(4);CHR$(233)
250 NEXT I
260 PRINT CHR$(232);CHR$(232);CHR$(232);CHR$(239);STRING$(72,232)
270 IF A$="?" THEN RETURN
280 C$=CHR$(240):C$=C$+C$+C$+C$+C$+C$
290 B$="      "
300 X1=1:Y1=1:R=2:C=5
310 PRINT FNPC$(R,C);C$
320 REM ********** Update screen **********
330 PRINT FNPC$(R,C);:IF NREV THEN PRINT C$;:GOTO 350
340 IF A$(Y1,X1)="" THEN PRINT C$ ELSE GOSUB 2340:PRINT CHR$(27)+CHR$(106)+A$
(Y1,X1)+CHR$(27)+CHR$(107)
350 PRINT FNPC$(23,1);B$;B$;B$;B$;B$;B$;
360 IF F$(Y1,X1)<>"" THEN PRINT FNPC$(23,1);"FORMULA=";F$(Y1,X1);B$;B$;B$;:GO
TO 380
370 IF A$(Y1,X1)<>"" THEN PRINT FNPC$(23,1);"TEXT=";CHR$(34);LEFT$(A$(Y1,X1),
30);B$;B$;B$;
380 PRINT FNPC$(24,1);">";B$;B$;B$;B$;B$;B$;FNPC$(24,55);"?=HELP    FILE:";FILE$
;:PRINT FNPC$(24,2);
390 REM ********** Input Routine **********
400 A$=INKEY$
410 IF A$="" THEN 400
420 R1=R:C1=C
430 IF ASC(A$)=RIGHT THEN PRINT FNPC$(R,C);B$:X1=X1+1:C=C+6:GOSUB 2230:PRINT
FNPC$(R1,C1);A$(Y1,X1-1);:GOTO 330
440 IF ASC(A$)=LEFT THEN PRINT FNPC$(R,C);B$:X1=X1-1:C=C-6:GOSUB 2230:PRINT F
NPC$(R1,C1);A$(Y1,X1+1);:GOTO 330
450 IF ASC(A$)=DOWN THEN PRINT FNPC$(R,C);B$:R=R+1:Y1=Y1+1:PRINT FNPC$(R1,C1)
;A$(Y1-1,X1);
460 IF ASC(A$)=UP THEN PRINT FNPC$(R,C);B$:R=R-1:Y1=Y1-1:PRINT FNPC$(R1,C1);A
$(Y1+1,X1);
```

Spreadsheet in BASIC

By Allen Howell

```
470 REM ***** Check if cursor is out of boarder
480 IF R<2 THEN R=R+1:Y1=Y1+1:PRINT BEEP$;:GOTO 330
490 IF R>21 THEN R=R-1:Y1=Y1-1:PRINT BEEP$;:GOTO 330
500 IF ASC(A$)=UP OR ASC(A$)=DOWN THEN 330
510 REM ***** String input routine
520 IF ASC(A$)=34 THEN PRINT FNPC$(24,1);"? ";:GOSUB 2270:A$(Y1,X1)=T$:PRINT
FNPC$(24,1);:F$(Y1,X1)="":GOTO 330
530 IF ASC(A$)=63 THEN 1910      'goto help
540 IF ASC(A$)=47 THEN 650       'goto command line
550 IF ASC(A$)=33 THEN 1500      'goto calculate routine
560 REM ***** Numeric and formula input routine
570 PRINT FNPC$(24,1);">";:IN$="":D$=A$:GOTO 590
580 D$=INKEY$:IF D$="" THEN 580
590 IF ASC(D$)<96 OR ASC(D$)>109 THEN 600 ELSE D$=CHR$(ASC(D$)-32)
600 IF ASC(D$)=13 THEN 750
610 IF (ASC(D$)=BAK OR ASC(D$)=LEFT) AND LEN(IN$)<1 THEN 330 ELSE IF (ASC(D$)
=BAK OR ASC(D$)=29) THEN IN$=MID$(IN$,1,LEN(IN$)-1):PRI
NT BAK$;:A$="":GOTO 580
620 PRINT D$;
630 IN$=IN$+D$:GOTO 580
640 REM ********** Input command routine **********
650 PRINT FNPC$(23,55);B$;B$;B$;B$:PRINT FNPC$(24,1);"Command (Z,P,S,L,Q, or
?): ";:GOSUB 2270:CD$=T$
660 PRINT FNPC$(24,1);B$;B$;B$;B$;B$;B$;
670 IF CD$="Z" OR CD$="z" THEN FOR I=1 TO 20:FOR J=1 TO 12:A$(I,J)="":F$(I,J)
="":NEXT J:NEXT I:FILE$="":GOTO 170
680 IF CD$="P" OR CD$="p" THEN 1110
690 IF CD$="S" OR CD$="s" THEN 1230
700 IF CD$="L" OR CD$="l" THEN 1360
710 IF CD$="Q" OR CD$="q" THEN PRINT CHR$(26);:SYSTEM
720 IF CD$="?" THEN 2090
730 PRINT FNPC$(24,1);" ";:GOTO 330
740 REM ********** Input numeric or formula function **********
750 PRINT FNPC$(24,1);B$;B$;B$;B$;
760 F$(Y1,X1)=IN$
770 FOR I=1 TO 6
780 L=INSTR(IN$,F1$(I)):IF L THEN 820
790 NEXT I
800 A=VAL(IN$):A$(Y1,X1)=STR$(A)
810 IF CALC THEN RETURN ELSE 330
820 F$=MID$(IN$,1,L-1)
830 S$=MID$(IN$,L+1)
840 IF LEN(F$)<2 THEN F=VAL(F$):GOTO 880
850 FOR M=1 TO 12
860 IF LEFT$(F$,1)=CHR$(64+M) THEN F2=VAL(MID$(F$,2,2)):F=VAL(A$(F2,M)):
GOTO  880
870 NEXT M:F=VAL(F$)
880 IF LEN(S$)<2 THEN S=VAL(S$):GOTO 920
890 FOR N=1 TO 12
900 IF LEFT$(S$,1)=CHR$(64+N) THEN S2=VAL(MID$(S$,2,2)):S=VAL(A$(S2,N)):
GOTO 920
910 NEXT N:S=VAL(S$)
920 IF I=1 THEN A$(Y1,X1)=STR$(F+S)
930 IF I=2 THEN A$(Y1,X1)=STR$(F-S)
940 IF I=3 THEN A$(Y1,X1)=STR$(F*S)
950 IF I=4 THEN A$(Y1,X1)=STR$(F/S)
960 IF I=5 THEN A$(Y1,X1)=STR$(F^S)
```

What I have come up with now is a 12 column by 20 row spreadsheet for the QX-10. It takes advantage of the QX-10's graphic capabilities and larger screen. The user can store and retrieve the spreadsheet's data to and from the disk drives, and also print it to the printer. Since I could never get PeachCalc to work properly on TPM, I have designed MINICALC to work on both CP/M and TPM.

If you are familiar with PeachCalc (or SuperCalc), then you will feel very much at home with MINICALC. If you have never used a spreadsheet program before, then MINICALC will open your eyes to their power and you'll think of all kinds of uses to put it to.

To run MINICALC, type it in **exactly** as it appears in the program listing using MBASIC. Then save and run the program. MINICALC will display a brief introduction, then ask you which operating system you are using. Select the appropriate choice. MINICALC also has built in help, so enter the '?' after the DOS selection if you are new to spreadsheets. Now MINICALC will proceed to draw an empty spreadsheet, and create a status line at the bottom of the screen. You may type in '?' again if you want more help.

I will not discuss the operation of MINICALC in this article, since MINICALC's help is already built in.

To keep the program as short as possible, not every precaution has been made to eliminate operator error. MINICALC will work fine as long as you stay within the scope of it's design. It will crash if bad filenames are entered, or if you try to divide by zero. Also, be sure to use all caps for filenames when saving and loading spreadsheet files when running under CP/M.

Only one mathematical formula is allowed in any one cell. A formula such as "F4/.5" is ok, but "F4/.5+A15" won't work. To duplicate the contents of any mathematical cell into a different cell, simply specify the location of the cell to copy and multiply it by 1 i.e., if cell A5 equals 76 and you want cell C16 to always equal the contents of A5, enter "A5*1" as the formula of cell C16.

The program automatically computes formulas when they are first entered, but if you change the contents of a cell containing only one number, the program will not automatically recalculate it. To recalculate the sheet, simply enter a "!". Depending on the setup of your worksheet, you may have to recalculate several times before all the cells are correct.

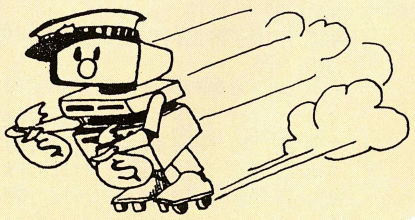
```
970 IF I<>6 THEN 1090
980 IF F2<>S2 THEN 1040
990 TT=0
1000 FOR SUM=M TO N
1010 TT=TT+VAL(A$(F2,SUM))
1020 NEXT SUM
1030 GOTO 1080
1040 TT=0
1050 FOR SUM=F2 TO S2
1060 TT=TT+VAL(A$(SUM,M))
1070 NEXT SUM
1080 A$(Y1,X1)=STR$(TT)
1090 IF CALC THEN RETURN
1100 GOTO 330
1110 REM ********** Print to printer **********
1120 PRINT FNPC$(24,1);"Prepare printer then press <RETURN>";:GOSUB 2270
1130 PRINT FNPC$(23,55);FLO$;"Printer not ready!";FLF$:LPRINT:PRINT FNPC$(23,
55);B$;B$;B$;B$;B$;
1140 PRINT FNPC$(24,1);"Printing...please wait";B$;B$;B$;
1150 FOR I=1 TO 20:T=0
1160 FOR J=1 TO 12
1170 IF A$(I,J)="" THEN 1180 ELSE LPRINT TAB(T);A$(I,J);
1180 T=T+6:NEXT J
1190 LPRINT
1200 NEXT I
1210 PRINT FNPC$(24,1);B$;B$;B$;B$;
1220 GOTO 330
1230 REM ********** Save to Disk **********
1240 PRINT FNPC$(24,1);"Filename (no extension!): ";:GOSUB 2270
1250 PRINT FNPC$(24,1);"Writing to disk...";B$;B$;B$;B$;B$;
1260 OPEN"O",1,T$+".CAL"
1270 FOR I=1 TO 20
1280 FOR J=1 TO 12
1290 PRINT#1,A$(I,J)
1300 PRINT#1,F$(I,J)
1310 NEXT J
1320 NEXT I
1330 CLOSE
1340 PRINT FNPC$(24,1);B$;B$;B$;B$;B$;
1350 GOTO 330
1360 REM ********** Load from Disk **********
1370 PRINT FNPC$(24,1);"Filename to Load: ";:GOSUB 2270:PRINT FNPC$(24,1);B$;
B$;B$;B$;B$;
1380 OPEN"R",1,T$+".CAL":IF LOF(1)=0 THEN CLOSE:KILL T$+".CAL":PRINT FNPC$(23
,55);CHR$(27)+CHR$(94);"File not found!";CHR$(27)+CHR$(
113):GOTO 330
1390 CLOSE:PRINT FNPC$(24,1);"Loading...please wait";
1400 OPEN"I",1,T$+".CAL"
1410 FOR I=1 TO 20
1420 FOR J=1 TO 12
1430 LINE INPUT#1,A$(I,J)
1440 LINE INPUT#1,F$(I,J)
1450 NEXT J
1460 NEXT I
1470 PRINT FNPC$(24,1);B$;B$;B$;B$;B$;
1480 CLOSE:GOSUB 1660
1490 FILE$=T$:GOTO 330
1500 REM ********** Recalculate **********
1510 PRINT FNPC$(24,1);CHR$(27)+CHR$(94);"Calculating...";CHR$(27)+CHR$(113);
1520 CALC=1:Y2=Y1:X2=X1
1530 FOR K=1 TO 20
1540 FOR J=1 TO 12
1550 Y1=K:X1=J
1560 IF F$(K,J)="" THEN 1580
1570 IN$=F$(K,J):GOSUB 770
1580 NEXT J
1590 PRINT FNPC$(24,14);K*5;"% Complete";
1600 NEXT K
```

Continued from page 27

CONCLUSION

As you can see, *StockChip* incorporates many of the above features, but in order to be considered among the more sophisticated investment programs, it has a great deal of catching up to do. According to Michael Ettel, President of Stanton Software, the intent is to keep *StockChip* just as is, except to update it as necessary due to changes in the investing laws. To quote Mr. Ettel: "To satisfy what we consider to be another spectrum of the investment population, we are formulating plans now for a new product for release by October, 1985." I suspect that this product will incorporate many if not all of the above items, and will of course, reflect a much higher price.

StockChip, by Stanton Software is an outstanding Stock Portfolio Management Program for the individual that does trading in the stock market, and does not have a need for a portfolio manager that incorporates such items as Options and Bonds. Additionally, I found the staff at Stanton Software to be extremely helpful in answering my questions. After an extensive survey of several stockbrokers, I had come up with a list of suggestions for a superior portfolio management program. Mr. Ettel was quite receptive to those suggestions, an indication, at least to me, that Stanton Software is extremely interested in user feedback, and in providing quality products. Keep in mind when looking for a program of this type, that *StockChip* is a well designed STOCK PORTFOLIO program, and is an excellent buy at $149. There are portfolio programs out there that do less and cost $50-75 more. As an ex-stockbroker I highly recommend this program. ■



```
1610 CALC=0
1620 GOSUB 1660
1630 PRINT FNPC$(24,1);B$;B$;B$;B$;B$;
1640 Y1=Y2:X1=X2
1650 GOTO 330
1660 REM ********** Update Screen **********
1670 K=1
1680 FOR I=1 TO 20
1690 FOR J=1 TO 12
1700 IF A$(I,J)="" THEN 1720
1710 PRINT FNPC$(I+1,J*6-1);B$;:PRINT FNPC$(I+1,J*6-1);A$(I,J);
1720 NEXT J
1730 NEXT I
1740 RETURN
1750 REM ********** HELP 1 **********
1760 PRINT CHR$(26);
1770 PRINT"* * * * M I N I - C A L C  I N S T R U C T I O N S * * * *"
1780 PRINT
1790 PRINT"Think of this program as a pencil, paper, and a calculator."
1800 PRINT"Most things that you do the hard way (figure budgets, car"
1810 PRINT"mileage, grade averages, etc.) can be done using this program."
1820 PRINT
1830 PRINT"This 'Spreadsheet' is in the form of a 12x20 grid in which"
1840 PRINT"information can be stored in each cell. There are a total of"
1850 PRINT"240 cells. To move the cursor around the grid, use the arrow"
1860 PRINT"keys to move up, down, right, and left.":PRINT
1870 PRINT"To define cells, first specify the letter, then the number.":PRINT
1880 PRINT"Press '?' for more help when using 'MINI-CALC'."
1890 A$=INKEY$:IF A$="" THEN 1890
1900 GOTO 150
1910 REM ********** HELP 2 **********
1920 PRINT CHR$(26);
1930 PRINT"To enter text, enter the double quotes, followed by desired text."
1940 PRINT"To enter numbers, enter numbers."
```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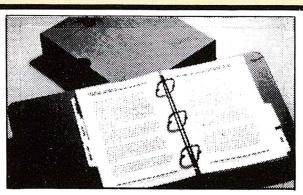

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```
1950 PRINT"To enter formulas, type in the cell block or number followed by
the"
1960 PRINT"   function, followed by another cell or number."
1970 PRINT"   Functions: +,-,*,/,^ and :     (Example:   C3/2  )"
1980 PRINT"To add rows or columns, use the ':' (meaning through) between the"
1990 PRINT"   cells you specify. Example: A1:I1  means to add all numbers
fro
2000 PRINT"   cell A1 through I1."
2010 PRINT"To enter the command mode, enter '/' (loading, saving and printing
)."
2020 PRINT"To recalculate the screen, enter '!' (may have to be calculated
two"
2030 PRINT"   or three times after a cell change)."
2040 PRINT
2050 ZZ$=INKEY$:IF ZZ$="" THEN 2050
2060 GOSUB 180
2070 GOSUB 1660
2080 GOTO 330
2090 REM ********** HELP 3 **********
2100 PRINT CHR$(26);
2110 PRINT"Z = Zap the worksheet (Erase)"
2120 PRINT"P = Print worksheet to printer"
2130 PRINT"S = Save worksheet to disk"
2140 PRINT"L = Load worksheet from disk"
2150 PRINT"Q = Quit program"
2160 PRINT"? = Get HELP"
2170 A$=INKEY$:IF A$="" THEN 2170
2180 A$="?"
2190 GOSUB 180
2200 GOSUB 1660
2210 GOTO 330
2220 REM ********** Check for out of boarder **********
2230 IF C>72 THEN C=C-6:X1=X1-1:PRINT BEEP$;
2240 IF C<5 THEN C=C+6:X1=X1+1:PRINT BEEP$;
2250 RETURN
2260 REM ********** Common input routine **********
2270 T$=""
2280 A$=INKEY$:IF A$="" THEN 2280
2290 IF ASC(A$)=13 THEN RETURN
2300 IF ASC(A$)=BAK OR ASC(A$)=LEFT THEN L=LEN(T$):IF L=0 THEN PRINT BEEP$;:G
OTO 2270 ELSE T$=LEFT$(T$,L-1):PRINT BAK$;:GOTO 2280
2305 IF LEN(T$)>80-C THEN PRINT BEEP$;:GOTO 2280
2310 PRINT A$;
2320 T$=T$+A$:GOTO 2280
2330 REM ***** add spaces to short string
2340 IF LEN(A$(Y1,X1))<6 THEN A$(Y1,X1)=A$(Y1,X1)+" ":GOTO 2340
2350 RETURN
```

It is recommended that this program be run under TPM. When under CP/M, the cursor is a solid block and tends to hide any information that is behind the cursor.

Also, if you create any text or number greater than six characters long, the cursor will erase the trailing portion of the text if you run the cursor to the right of the cell that originated the text. This may sound fuzzy now, but you'll find out what I mean after you run the program a few times. If the screen does get messed up or cluttered, simply go to the HELP via the '?', and return to the worksheet.

If you wish to compile the program, be sure to remove the apostrophe in line 95 of the program. For some reason, the arrow keys get re-defined when it gets compiled. Also, if you wish to run this program from Valdocs via the MENU key, then select CP/M as the operating system when MINICALC is initialized. If you run MINICALC from the "A>" or "B>" prompt in TPM, then you must select the TPM system.

If you wish to save yourself from entering the program by hand, then it may be a relief to know that this program will be included with this month's "Disk of the Month". For those of you eager to use it now, happy key-plinking! ■

	A	B	C	D	E	F	G	H	I	J	K	L
1	New carpet analysis											
2												
3	Room		Length		Width			Sq. Ft.		Sq. Yds.		Cost
4												
5	Living room		20		12			240		26.6667		173.067
6	Kitchen		12		12			144		16		103.84
7	Hall		10		3			30		3.33333		21.6333
8	Master bedroom		15		13			195		21.6667		140.617
9	Bedroom #1		12		12			144		16		103.84
10	Bedroom #2		10		11			110		12.2222		79.3221
11	----------		----------		----------			----------		----------		----------
12	Totals							863		95.8889		622.319
13												
14												
15												
16	New carpet cost per sq. yard:		6.49									
17												
18												
19												
20												

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On Saturday, April 27, Epson will host an industry first — a national video teleconference dedicated to educating users in the fullest use and enjoyment of their Epson products. (The date of April 27 was still tentative at press time).

The full-day conference will be run simultaneously in 10 U.S. cities, via satellite link-up to major hotel auditoriums and other locations. Highlight of the program will be a closed-circuit television show, staged at a Los Angeles Hotel before an audience of 300. The program will be fed via satellite to 2,000 more Epson users assembled in the nine other cities around the country. Epson personnel and users alike will cover applications for Epson printers, and the QX-10, QX-16, HX-20 and Geneva computers.

The current list of EPSON INTERACT '85 cities includes **Atlanta, Boston, Chicago, Dallas, Detroit, Los Angeles, New York, San Francisco, Tampa and Washington D.C.**

In an hour of interactive Q&A, users around the country will have a chance to pose questions to Epson and Rising Star support and service personnel based in Los Angeles.

The goal of EPSON INTERACT '85 is to educate users in an entertaining way, and to celebrate the arrival of Valdocs 2.

The use of interactive telecommunications will permit users to meet a wider array of experts than would be possible any other way.

Speakers are still being assembled and confirmed, but names will range through a luminous list of Epson owners, including two national columnist/personalities, and many experts of interest to the audience.

Many third-party developers will also be on hand, including Titan Technologies (QX-PC2 add-on board), Executive Systems (developer of the Epson CP/M "B" releases), Prometheus Products (modems), Compuserve, MicroPro (Portable Wordstar), Bi-Tech (multiplexing systems and hard disk storage) and many others.

EPSON INTERACT '85 will also offer six classes at each site, on topics ranging from "Making Money with Your Micro," to "The World at Your Modem" and "Everything You Need to Know About Valdocs 2." Attendees will choose four classes from the six. Each person that comes to EPSON INTERACT '85 will receive a registration packet with hand-out materials for all classes, gifts, product brochures and discount purchase offers from hardware and software companies.

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Disk of the Month

EC-8 This month's volume contains a semi-integrated small business package which includes a simple bookkeeping system, accounts receivable system, inventory, payroll, checkbook, various financial programs, and a small spreadsheet program (MiniCalc). All of these programs are tied together into a menu driven system. All of the programs are written in MBASIC, which will allow users with MBASIC programming skills to modify these programs to their own specific application. Also included is a READ.ME file which tells you which CP/M utility programs are recommended and required for easier setup and operation of the programs on this disk. These public domain programs are provided on a quality diskette and the price does include postage and handling. Please be sure to indicate the disk order number (EC-8) with your check. **To order the Disk of the Month, please send $15 to the EpsonConnection, P.O. Box 14027, Detroit, MI 48214, Attn: Disk Service Dept.**

Disclaimer: All of the programs and documentation on this disk are known to be public domain and no warranties are expressed or implied. There are no guarantees with public domain software. All of the programs have been tested on the Epson QX-10, and are known to run. Public Domain programs are programs written by other users, for public use at little or no charge, other than the charge for mailing and materials. **Note**: We imply no similarity, or advise any comparison, between public domain software and software that is commercially produced. **Note**: A beginning knowledge of CP/M is recommended to utilize this software.

Below are some of the menu screens contained on this disk:

```
====================================
          M A I N   M E N U
====================================

    <1> SIMPLE BOOKKEEPING SYSTEM
    <2> ACCOUNTS RECEIVABLE SYSTEM
    <3> INVENTORY SYSTEM
    <4> PAYROLL PROGRAM
    <5> CHECKBOOK PROGRAM
    <6> FINANCIAL PROGRAMS
    <7> MINICALC SPREADSHEET PROGRAM
    <8> EXIT TO CP/M

        ENTER YOUR CHOICE? _
```

```
A C C O U N T S   R E C E I V A B L E
====================================

      CURRENT FILE: ACCOUNTS

   <1> SELECT CURRENT FILE
   <2> ACCOUNTS RECEIVABLE PROCESSING
   <3> ACCOUNTS RECEIVABLE REPORTS
   <4> RETURN TO MASTER MENU
   <5> BRIEF DOCUMENTATION

       ENTER YOUR CHOICE? _
```

```
B O O K K E E P I N G   M E N U
==============================

      CURRENT FILE: MASTER

   <1> SELECT CURRENT FILE
   <2> CREATE AND INITIALIZE FILE
   <3> POSTING JOURNAL ENTRIES
   <4> TRIAL BALANCE
   <5> INCOME STATEMENT
   <6> BALANCE SHEET
   <7> CLOSING ACCOUNTS
   <8> ACCOUNT FILE LIST
   <9> ACCOUNT DISPLAYING AND CORRECTING
  <10> JOURNAL PRINT
  <11> INCOME AND EXPENSE COMPARISON
  <12> RETURN TO MASTER MENU
  <13> BRIEF DOCUMENTATION

       ENTER YOUR CHOICE? _
```

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To receive your program disk which includes everything necessary to get started; send a check or money-order for $38.50 to:

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IF YOU OWN A QX-10, YOU OWE IT TO YOURSELF TO GET QXDRAW!

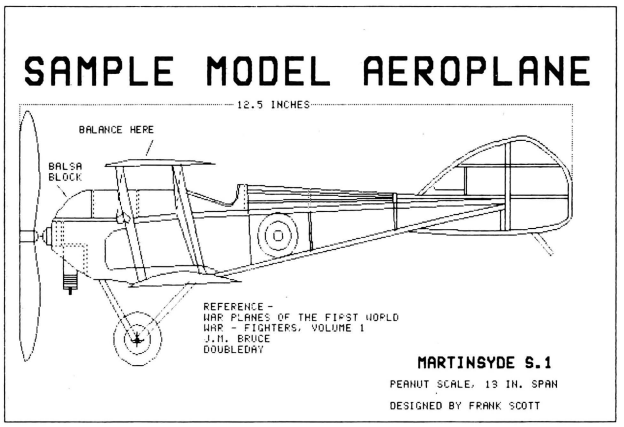
WHAT IS QXDRAW?

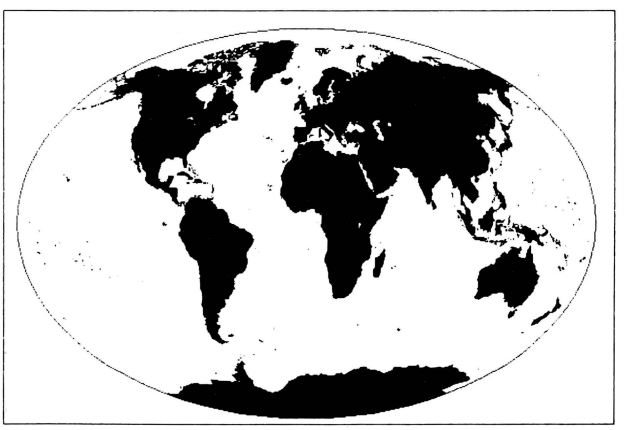
QXDRAW is a powerful graphics design tool that exploits the excellent graphics capabilities of the Epson QX-10. It allows someone unfamiliar with computers to design and draw figures, charts, schematics, or blueprints in no time. QXDRAW has the capability to store, retrieve, and print figures drawn on the screen. In addition, it can fully manipulate figures and text by changing size, angles, and dimensions.

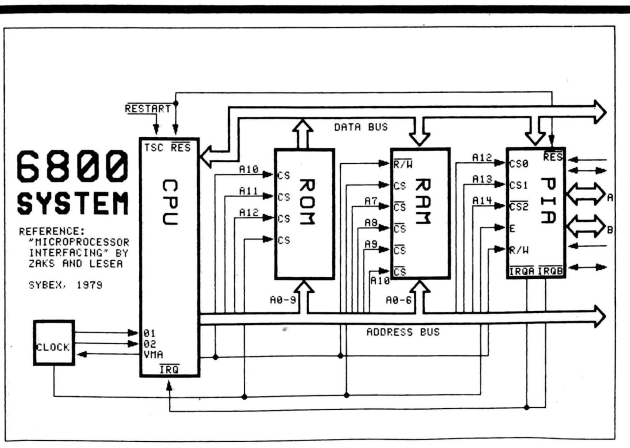
QXDRAW —

* Provides an easy-to-use cursor that can be moved about the screen.
* Draws straight lines between points on the screen.
* Draws curves between points on the screen.
* Draws circles and ovals easily.
* Allows solid, dotted or dashed lines to be used.
* Allows lines of varying thickness to be used.
* Includes "area fill" capability.
* Features the Epson function keys: HELP, UNDO, STORE, RETRIEVE, PRINT, INDEX, and STOP.
* Allows text to be displayed at any location, size, or angle.
* Stores and retrieves the screen display on disk.
* Prints the screen display on Epson printers.
* Allows figures and symbols to be created, stored, and retrieved at any location, size, or angle.
* Allows text and figures to be slanted in any direction, giving modern or three-dimensional effect.
* Provides for user-created files to be input and displayed on the screen. This allows data from other programs to be used.

NEW LOW PRICE **$99.95**







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QXSM-1

SPEECH & SOUND SYNTHESIZER

FEATURES:

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- UNLIMITED VOCABULARY
- SIX VOICES OF SOUND & MUSIC
- VERY EASY TO USE
- 2W ON BOARD AMPLIFIER

THE SPEECH SYNTHESIZER

The unlimited vocabulary QXSM-1 is a sophisticated, low cost speech synthesizer. It talks fast or slow, monotonically or with intonation. Words can be spoken in their entirety or spelled letter by letter. The system also pronounces punctuation and numbers.

SOUND & MUSIC

The QXSM-1 has six channels of independently controlled sound generators which can be used for production of a wide variety of complex sounds as well as eight octaves of music.

SOFTWARE & DOCUMENTATION

The provided software consists of two menu driven programs controlling speech and sound effects. Also included is a friendly user's manual.

LIST PRICE: $319.00

UNIVERSAL COMPUTER PRODUCTS

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DEALERS INQUIRES INVITED

USER SUGGESTION

Inserting a PeachCalc Spreadsheet into a Valdocs Document

Submitted by the North Jersey Epson Users Group / Jay Newell.

PeachCalc is a handy way to create budgets and invoices, but few QX-10 users realize that a PeachCalc spreadsheet can be inserted into a Valdocs document. Here's how to do it:

Create your PeachCalc spreadsheet as usual.

At the slash mark, select (O)utput, (D)isplay, (A)ll, (D)isk.

Respond to the request for filename with (B:FILENAME). This command will write your spreadsheet to the B: diskette, and it will also automatically add a ".PRN" as the filename extension. B:FILENAME.PRN.

At the slash mark, select (Q)uit PeachCalc.

Insert your Valdocs system disk in the A drive, and boot the system as usual.

At the point in your document that you want to insert the spreadsheet, hit CTRL-Q to activate the Quirks menu, (R)etrieve a non-indexed file, and ask for the file under the name B:FILENAME.PRN.

You can edit, format, store and print the spreadsheet like any other Valdocs document. However, any changes that you make in the numbers on your spreadsheet will not trigger recalculations of spreadsheet values.

^ A reprint from the January issue as corrected. ^

WORD SEARCH

WORD LIST

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K	T	P	S	C	I	H	A	2	C	P	X	Q	B	B	I	C	M	I	2

SmartKey $$ Slashed

Now everyone can afford to supercharge their computing with **SmartKey II Plus**, the software program that Peter McWilliams and a cast of thousands rave about. *SmartKey II Plus* speeds up and improves accuracy in computing by letting you reduce multiple keystrokes to the touch of a single key. In a new national ad campaign Software Research Technologies, originators of SmartKey II, have slashed the retail price of this immensely popular program. In response, Central's new low, low price is:

NEW!

SmartKey II Plus Super Combo Pak $49

—includes SmartPrint II Plus and Screen Smarts

You can use this powerful program to assign thousands of keystrokes to one or more keys on your keyboard. Once you have redefined keys, you can put them to work or change them at will. All without interfering with the regular function of your typewriter-like keyboard. You can also store your "smartkey" definitions in a special file and use them later, or make numerous definition files to use with a variety of your favorite programs or projects. Imagine saving complex command codes, boilerplate paragraphs, inventory numbers, or whatever, and then injecting any of them into your work with the stroke of a single key. It's true, SmartKey makes computing exciting again.

Central's specially priced **$49** combo pak includes SmartPrint II, a program that greatly enhances the operation of dot matrix printers. In addition, Central's combo pak includes, as an exclusive bonus, a free copy of Paul Golding's $15.95 book, *Screen Smarts, The Computer Tamer's Guide*. This book shows how Mr. Golding, a professional writer, uses SmartKey II to turn his humble computer into a supercharged dedicated word processor. Please don't delay, this offer may not be repeated. Order today to get this hard hitting $115 combo pak for $49.

Warning: There's nothing like SmartKey. It makes similar programs look dumb. Comes with a complete step by step manual. Easy-to-use. Saves time and money too.

$399 IBM Computer

Turn your Epson into an IBM-type computer for only $399. Titan Technologies' new QX-PC2 is a popular snap-in card that fits into an easy-to-reach slot in your Epson QX-10. The QX-PC2 helps you make your Epson into a rip roaring IBM-type computer within minutes.

"...the QX-PC2 is an inexpensive alternative to trading your QX-10 in on a 'newer' technology. It is a tool that once mastered will expand the QX-10 to a new level of computing. I would be lost without it."
— Jim Markevitch
— *Epson Connection*

Titan

Titan:
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The QX-PC2 co-processor board is an expertly conceived component that contains the guts of an IBM computer. It includes a powerful 16-bit 8088 CPU. Comes standard with a full 192K of Ram, its own built-in memory, and is fully expandable to 512K Ram. Yes, your Epson is now clearly an excellent place to experience 16-bit processing without sacrificing your original investment in an innovative 8-bit computer.

- Simple snap in installation
- Fast 5 MHz processor
- Runs MS-Dos and PC-Dos software
- Support for hard disk
- MS-DOS 2.11 operating system
- Parallel and serial port support

The QX-PC2 lets you operate software that other IBM-emulators can't. The QX-PC2 board lets you use virtually all the software written for the IBM PC including the tough stuff like Lotus 1-2-3, Symphony, dBase III, and Framework. Thousands of dedicated Epson users and corporations have found the QX-PC2 turns an Epson into a whole new exciting computer able to use thousands of IBM-type software programs. You will too.

Don't spend thousands of dollars on an IBM-type computer in a fast changing market when you can get one on a card, plug it into your Epson, and get identical results. It's easy to operate a world of 16-bit IBM-type software on your Epson with the QX-PC2 co-processor. In addition, with the QX-PC2 board in your Epson, you can still operate CP/M and TP/M software. You can't do that on a straight IBM machine. The retail price of Titan's new QX-PC2 card with standard 192K Ram, operating manual, and MS-DOS system disk is $595. Central Computer is proud to add Titan Technologies' products to our line. For a limited time only, Central's low introductory price to the standard QX-PC2 card is $399. Please see the *QX-PC2 Options Guide* above for information on optional features. Order today to begin experiencing IBM-type power on your Epson soon. Central promises to beat any advertised price on this unit. It's time to upgrade that computer. Order today to get the QX-PC2 board fast. In stock, ready for immediate delivery. This offer may not be repeated. Order today.

QX-PC2 OPTIONS GUIDE

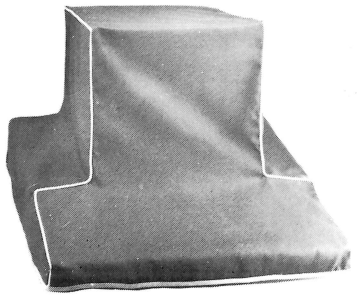
Description	List	Price
192K QXPC2	$ 595.00	$399.00
256K QXPC2	$ 670.00	$499.00
384K QXPC2	$ 895.00	$650.00
512K QXPC2	$1045.00	$799.00
128K Aux	$ 249.00	$199.00
256K Aux	$ 399.00	$329.00
Ram Software	$ 39.00	$ 36.00

192K	Standard MSDOS co-processor card.
256K	Standard card with more memory.
384K	Standard card and attached memory.
512K	Standard card. Maximum expansion.
128K Aux	128K Auxiliary card adds memory.
256K Aux	Auxiliary card adds memory.
Ram Soft	Ram disk software for card.

— All units fully supported by Titan.
— Complete 12 month factory warranty.

Introducing A Classic Form Fitting Epson Cover

Photo: Form-fitting cover over CPU, monitor, and keyboard.



At last, the classic Epson dust cover you'll be proud to own and use. This first rate computer cover is made from a premium, lint free, static free, washable, free breathing, and fade resistant sailcloth. It comes in a rich looking Navy blue or Sand. The Navy cover has a smart contrasting silver gray piping and trim that adds a superior finished look. Not to be outdone, the Sand cover is handsomely finished in a rich chocolate piping and trim.

For a limited time only, your price for this factory direct, custom made, one-piece sailcloth Quality Cover is $18.95. When ordering remember to indicate color preference. This special low price is subject to change. You must be completely satisfied with your purchase of this cover or we will refund your money immediately. Order today.

Matching sailcloth covers for all Epson and ComRiter printers: $15.95. Please indicate make and model of printer.
New. Special 2-piece QX-10 cover: $21.95 per set.

- Quality tailoring
- Easy care fabrics
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Font provides fonts in sizes from
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low-cost Epson (MX, RX, FX) and
Font is an easy-to-use software pa
compatible systems; no special hardv

Actual sample produced by an MX-80 and Fancy Font.

Incredible Printing Machine

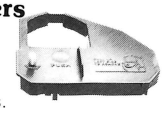
Your Epson printer is going to get even better. *Fancy Font* can make it into an incredible printing machine. The *Fancy Font System* is a software program that turns the bits and bytes generated by your computer into over 30 font sets in sizes from 8 to 40 points that can be printed on any Epson MX80 with Graftrax, Epson FX or RX printer, or Gemini 10X printer.

Fancy Font styles include Roman, Bold, Italic, Script, Old English, and more. In addition, custom forms, invoices, labels, signs, foreign languages, mathematical notations, view graphs, resumes, newsletters, brochures, complete manuals, invitations, place cards, and high-resolution, proportionally spaced, letter quality business and personal letters can all be printed on your Epson printer with *Fancy Font* at the helm. *Fancy Font* is a product of SoftCraft Inc. You may have seen SoftCraft's national ads. They are printed with *Fancy Font* on an Epson printer. The ad is powerful visual medicine. The list price for the fully documented *Fancy Font System 2.0* is $180. Central's price is only $149. Order *Fancy Font* today and add an amazing sparkle of creativity to all your printed materials. Please indicate name and model of your printer when ordering. *Fancy Font* will make your Epson printer and Valdocs or CP/M word processor come alive. It's magical.

Lockable Diskette Defender

Handsome, sturdy, smoke-tinted acrylic tray holds 70 Epson-size diskettes. Flip-up lid keeps out dust, debris, and moisture, and locks securely to guard your important work. Comes with 7 dividers with index tabs for easy filing and to keep floppies upright to prevent bending, warping, and scratching. Tough and secure metal lock never comes in contact with diskettes because it is enclosed in a special plastic housing. Super value at $22.95 for one, or $21.00 each if you buy 2 or more. Keep prying eyes and sticky fingers away from your data. Order today.

LQ 1500 Users



Compare and save. Epson's LQ 1500 ribbon gives you 3,000,000 characters. Our top quality LQ 1500 ribbon produces 4,500,000 characters. Epson's list price is $17.50 per ribbon. Our price is $49 for box of six ribbons. In stock. Order today Complete Satisfaction Guaranteed.

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QX-10 Software

CP/M Prod. Description	List	Central
ASHTON TATE		
dBase II	$495.00	$368.00
ATI TRAINING DISKS		
CP/M	$ 39.95	$ 33.00
MBasic — **Training software.**	$ 39.95	$ 33.00
Multiplan — **Speeds learning.**	$ 75.00	$ 54.00
SuperCalc — **Gives fast results.**	$ 75.00	$ 54.00
Wordstar	$ 75.00	$ 54.00
BORLAND INTERNATIONAL		
Turbo Pascal 2.0	$ 49.95	$ 47.00
Turbo Toolbox	$ 49.95	$ 47.00
Turbo Gift Pak with Turbo Tutor	$ 99.95	$ 92.00
CDE SOFTWARE		
Checks & Balances	$ 74.95	$ 69.95
CHUCK ATKINSON PROGRAMS		
Quick Check Plus AR	$195.00	$155.00
Retail Inventory +Q Register	$395.00	$299.00
CONTINENTAL SOFTWARE		
Home Accountant Plus	$ 99.95	$ 79.95
DIGITAL MARKETING/PRO TEM		
Bibliography	$ 99.00	$ 89.00
Hyper Typer, Typing Tutor NEW	$ 29.95	$ 26.00
Milestone, Project Manager	$250.00	$199.00
— call for other Wordstar enhancers		
EAGLE ENTERPRISES		
Citation	$185.00	$155.00
General Ledger	$185.00	$145.00
FYI, INC.		
FYI 3000	$395.00	$295.00
SuperFile — with Sort 'n Merge	$195.00	$145.00
both superior textual matter database managers		
INFOCOM		
Zork I	$ 39.95	$ 37.00
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PlanetFall	$ 39.95	$ 37.00
— all other Infocom series, call for prices		
LEXISOFT		
SpellBinder	$495.00	$299.00
MICROPRO		
WordStar	$495.00	$295.00
MICROSOFT		
MultiPlan	$195.00	$155.00
MBasic Compiler	$395.00	$299.00
MICROSOLUTIONS		
Uniform	$ 69.95	$ 59.95
reads & writes 52+ computer formats & MSDOS		
MYCROFT LABS		
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OASIS SYSTEMS		
The Word Plus	$150.00	$105.00
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Q-Pro-4	$595.00	$395.00
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Word Wiggle	$ 29.95	$ 28.00
— all other Toolworks programs, call for prices		
SORCIM		
SuperCalc 2	$295.00	$235.00
STAR SYSTEMS		
The Accounting Partner (TAP)	$395.00	$285.00
Star Systems 1, Integrated	$795.00	$645.00
Upgrade TAP to SS1 Integrated	$400.00	$360.00
T/MAKER COMPANY		
T/Maker Integrated	$495.00	$379.00
with database manager & spelling checker		
WRITING CONSULTANTS		
Proportional Star NEW	$ 75.00	$ 69.00
Synonym Finder	$124.95	$ 95.00
90,000 word thesaurus for Wordstar users		

Supplies

Dysan DSDD diskettes	10/box	$ 34.00
QX-10 User's Guide, Hansen	$ 17.95	$ 15.95
Screen Smarts, Computer Tamer	$ 15.95	$ 12.95

Prices, specifications, and offers subject to change without notice.

"Now I'm going to computerize my checkbook"

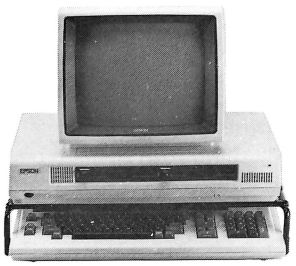
Computers crunch numbers. It's that simple. If you're not using your computer to manage your money, you're missing a chance to put pencil-sharp accounting skills at your fingertips. Chuck Atkinson's **Quick Check** software program is a home and small business money manager so easy to use that if you can push a key it will help you computerize your checkbook.

Quick Check tells you exactly where your hard-earned money goes. *Quick Check* lets you set up your own expense and income codes, or use built-in codes, so you can start entering checks and deposits immediately. You don't have to know about accounting to use *Quick Check*. This common sense program gives you instant fingertip access to a wide range of information about your income and expenses. Single keystroke commands help you pay bills, keep track of deductible and non-deductible items, correct mistakes, change dates, and reconcile your checkbook. This program even prints checks and addresses them automatically. *Quick Check* is written in CB80 native code. It is fast, accurate, and forgiving. No slowdown for sorting.

Home and small business accounting can't get any easier than this. Please don't spend another moment thinking about computerizing your checkbook. You can start getting that checkbook in shape now. The list price of *Quick Check* is $95. Central's current price is $79. Order today.

Attention: The rewards of using *Quick Check* include saving time, money, work, discomfort, and worry about your money. *Quick Check* is absolutely the easiest full-featured money manager, check printer, and budget organizer available. Bar none.

Perfect Epson Stand



Simple, strong, sturdy, safe. These words describe an attractive stand that provides a perfect spot to place your Epson computer and monitor on. This stand is made from rounded, steel rods covered with a thick, shiny, soft, black polymer material that protects your Epson and table top from scratches. Unlike flat wood or acrylic panels used in other stands, the tough supporting rods of the Smart Stand (TM) do not obstruct air flow. In fact, since your Epson is lifted off the table top and fully supported by this stand, air flows freely all around your computer to help keep it cool. When you're finished computing, you can slide the keyboard completely under the stand to create a working area on your desk. Incidentally, lifting your QX-10 off the table top makes it much easier to insert and remove diskettes out of the disk drives. The Epson Smart Stand is a super value at $34.95. Try it for 15 days. If not completely satisfied, send it back for a full refund. Matching 80 or 132 column printer stands are only $26.95. Order today.

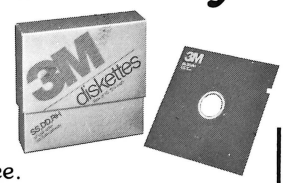
Public Domain Pak

The Free Software Handbook is chock full of documentation, reviews, and commentary on the use and abuse of the best 70 CP/M public domain programs. It might cost a dedicated hacker hundreds of hours and maybe thousands of dollars to track down this box full of goodies. Super CP/M utilities like Unerase, D.Com, and RPIP are here. This bundle of free software includes Bio.Com, Wumpus.Com, Adventure.Com, Food.Com, and dozens of other popular programs too.

If you want to share in the free software bonanza but don't have the time to search through piles of useless software to find a few precious gems, this book is for you. The list price of *The Free Software Handbook* is $17.95. Central's price is $15.95. However, QX-10 users can now get both *The Free Software Handbook* and all 70 programs reviewed in the book for $49. Save yourself the expense, and time and effort of compiling these programs. Order the *Free Software Handbook* and companion programs today.

The Free Software Handbook is published by PeopleTalk Associates. The authors looked at thousands of programs. They challenge readers to find better ones. It can't be done.

Save Money. Save Worry.



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Box of 10 DS-DD QX-10 diskettes: **$24.00**
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(805) 524-4189

Dear Central,

Please send me the items listed below. I want fast friendly service. If I have ordered the SmartKey II combo pak, remember to send me a free copy of *Screen Smarts, The Computer Tamer's Guide*. My check, money order, or credit card number is enclosed. Thank you.

Description	Price
Sub-Total	
CA Resident 6% Tax	
Postage & Handling	$ 3.00
Total	$

FIRM MONEY BACK GUARANTEE ORDER WITH CONFIDENCE

☐ Navy blue ☐ Sand
☐ Send free catalog ☐ Send free Screen Smarts
☐ Check enclosed ☐ Money Order enclosed
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To order by mail use coupon, letter, or photo copy. Thank you.

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Central Computer Products

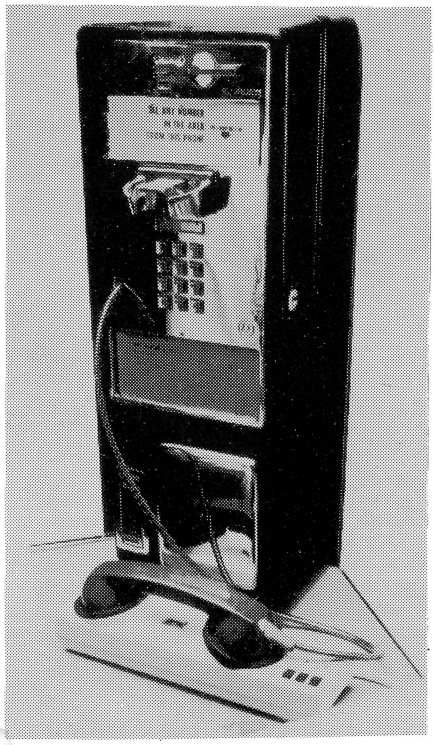
A Discussion of the CX-20 Acoustic Coupler

by Mike Morra

There has been a rash of comments regarding the use of the CX-20 with the Geneva; most having to do with "communications error" messages or garbled text. I will tell you what I know about this, as there were some similar phenomena occurring with the HX-20/CX-20 combo.

It seems that the CX-20 can be VERY intolerant of certain telephone sets, especially cheaper non-Western-Electric units. What happens (I'm told) is that there is a distinct "feedback" between the speaker and receiver, where data tones from the speaker are picked up to some degree by the receiver. This causes problems when you are talking to a remote system that echoes your transmitted data (which many bulletin boards and data bases do!).

When you are connected to CompuServe or a BBS, characters that you type are NOT simultaneously sent to your screen and to the modem. What you type goes ONLY to the modem. CIS or the BBS your calling is kind enough to regurgitate (or "echo") each character it receives from you. This means that the characters you see on your screen have made a "round trip" from your computer to the remote and back, and this occurs almost instantaneously. This type of communication is a form of full duplex communication, more aptly termed "echoplex."



Now, the feedback problem rears its ugly head because the echoed data coming back to you is interfered with by the data being sent from you at almost the same instant. What usually happens is that the remote receives perfectly, but the echo that you get is all garbled. If you are talking to a BBS, the SYSOP can confirm this or, on CIS, you may find that the commands you are entering, albeit garbled at your screen, seem to have the desired effect nonetheless.

The other tipoff is that whenever the remote is sending to you by itself (i.e. not echoing what you are sending), everything looks fine! If what you type in looks bad, but what the remote sends to you looks fine, then this feedback could be the culprit.

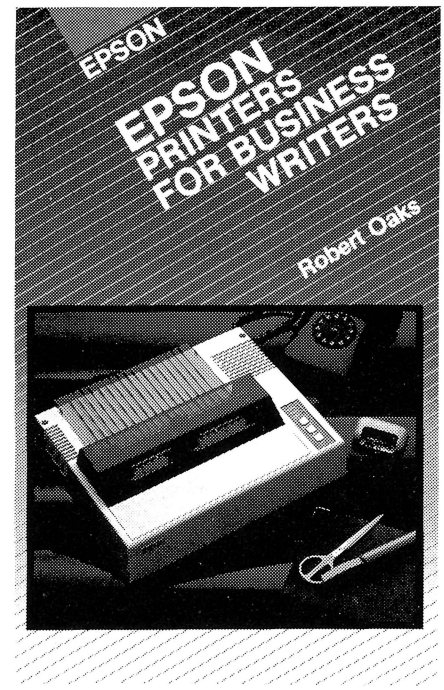
One solution which has been used with some success is to place a double layer of a handkerchief in each of the CX-20 cups before jamming the headset into them. The cloth tends to attenuate the feedback and alleviate the problem. If you are using a non-western telephone, try it again on a leased Bell set and see if it helps. Also, there is a small trimmer potentiometer (labeled "VR1") inside the CX-20 — tweaking this control throttles back the carrier volume (which invariably is set at the factory to the maximum). Be sure to have the modem set to 'TEST' when doing this adjustment. And also realize that you perform such a procedure at your own risk.

Mike Morra, in addition to being a most helpful contributor and frequent caller to the CIS service, is Technical Manager at Epson East.

New Products

Epson Printers for Business Writers

This book includes a thorough introduction to the workings of Epson printers and has instructions on how to control it directly with BASIC programs. It demonstrates how to customize your word processor to your printer. You learn how to manage type faces and use graphics.
Published by:
Reston Publishing Company
Reston, VA



QX MBA Job Cost Accounting System
CP/M $595.00

Designed for project-oriented businesses, the MBA Job Cost accounting system is an extremely flexible, transaction driven product that lets you structure your costing records to the particular needs of your business. It allows for a job-phase structure with user definable overhead allocation, allowing rates to be individually defined by cost and category phase. The system facilitates the automatic structuring of new job-phase definitions based on prior jobs.

Micro Bus
Appl
12281 Nicollet Ave
Burnsville, MI

New Products

X COMRITER CR-IV $995.00

The newest Comriter printer offers many new features: 35 cps, a 7K buffer, bidirectional printing, super and subscript, auto underlining, shadow print, double print, 15 print styles, alternate color ribbon, and has optional accessories including a cut sheet feeder and a tractor feeder.

Comrex
International Corporation
3701 Skypark Drive, Suite 120
Torrence, CA 90505

QX Suspect CP/M $45

This latest game from Infocom casts you in the role of a newspaper reporter invited to an elegant masquerade ball. Dressed inappropriately as a cowboy, you mingle with blue-bloods in the magnificent ballroom until murder halts the festivities. The finger is pointing at you, and you have only a few hours to convince the police of your innocence.

Infocom
55 Wheeler Street
Cambridge, MA 02138

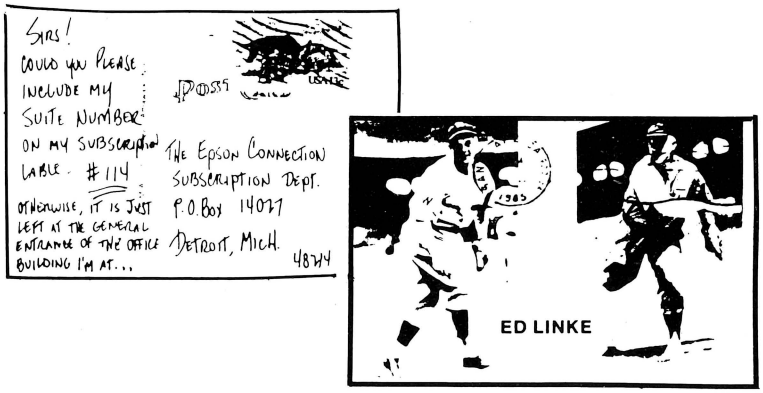
QX Milestone CP/M $250

Milestone is a business project management system allowing your computer to become a powerful business planner. Based on Critical Path Analysis, this easy to use program is menu driven. Screen prompts help you divide projects into individual activities.

Digital Marketing
2363 Boulevard Circle
Walnut Creek, CA 94595

Continued on page 50

Will the person who sent this postcard please give us their name and address so we can put the correction into our address list.


SIRS!
COULD YOU PLEASE INCLUDE MY SUITE NUMBER ON MY SUBSCRIPTION LABLE. #114
OTHERWISE, IT IS JUST LEFT AT THE GENERAL ENTRANCE OF THE OFFICE BUILDING I'M AT...
THE EPSON CONNECTION
SUBSCRIPTION DEPT.
P.O. BOX 14027
DETROIT, MICH.
48214
ED LINKE

SUPPORT PRODUCTS for EPSON COMPUTERS

*** HX-20 ***

* PSC-1 The ORIGINAL PowerSafe SMART-Charger $49.00
  This SMART-Charger was designed for CONTINUOUS OPERATION of your HX-20 without battery damage. Selected by many VAR and OEM houses to enhance products and applications with the HX-20.
* ST-2 Analog Interface Module for HX-20 CALL
  32 0-5v inputs - 32 relay output drivers 2 pulse counter inputs - Optional D/A outputs & memory expansion. Ideal for Energy-Management, Security, Data-Logging, Automated Testing and Process Control.
* HX-FORTH Language for the HX-20 $195.00
  Includes extensive manual - Two 8K Proms. HX-FORTH can be used as a complete development system with support for disk drives (TF-20) and a terminal driver. Many other features included.

*** QX-10 ***

* CP/M B 2.25 Update to original 'B' Version $19.00
* CP/M B CALL for latest version, availability and pricing.
* RSI Basic with graphics commands $99.00
* Fancy Font Typesetter by SoftCraft $175.00
* Q-Plotter Graphics by Metro-Software $199.00
* QX-Draw Graphics by American Small Business $99.00
* Uniform Disk drive alteration utilities $69.00
* Bi-Tech Hard Disk Systems Information & pricing available.

* EPSON Technical, Reference and Service Manuals
* HX-20 Technical Manual (HX-TM) with schematics $40.00
* HX-20 Software Manual (HX-SM) with 6801 uP Doc $40.00
* PX-8 Technical Manual (PX-TM) with Schematics $40.00
* QX-10 Technical Manual (QX-TM) with Schematics $40.00

Other manuals are available - Call or write for list.

G. W. SMITH ASSOCIATES
62 North Chapel Street * Newark, DE 19711
(302)738-7308 VISA MASTERCARD
Please allow $3.00 for shipping on most small items such as manuals & software, $4.00 for HX-SM. Sorry NO COD's. (Prices subject to change)

Rx for PX

Downloading from the PX-8 to the Atari and Apple IIe

To download files from the PX to an Atari, simply plug the Epson 725 printer cable into the Atari 850 interface. Set the Atari to 9600 baud, 8 bits, 1 stop bit, even parity. Use CONFIG on the PX to set the same communications parameters. Then use one of the public domain Atari communications programs like AMODEM42 to receive the files from the PX (again with a program that supports XMODEM protocol). To go from the PX to the Apple, you need to have a serial card in the Apple (preferably the Super Serial Card). Again you just connect the 725 cable to the serial connector of the Apple card, set identical communications protocols as described above, and use a modem program supporting XMODEM protocol. Both of these setups allow transfer of ASCII and binary files.

Applications ROMS

All of the application ROMS for the PX, with the exception of the GENEVA CONNECTION are CMOS. The GENEVA CONNECTION, however, is NMOS. The significance of this is the amount of power that the respective types of ROMS consume. CMOS are low power ROMS while NMOS are relatively high power ones. ROMs in drives B and C of the PX drain power only when accessed (when a program is loaded), so the amount of power drainage is insignificant. Drive I (the ROM socket drive in the Multi Function Unit) continuously drains power. Hence, you do not want to put the high power consuming GENEVA CONNECTION ROM in this drive. Again, the GENEVA CONNECTION is the only ROM that you need be concerned about drive placement. All the remaining ROMs that are currently available, and the ones scheduled for release (dBase, Traveling dBase, Rags to Riches, Traveling Software, Teledex, and Telemerge) are CMOS, low power ROMS.

Downloading files from CompuServe with the GENEVA CONNECTION

To download files from the EpsOnLine special interest group on CompuServe try the following procedure. Select XMODEM from the CompuServe protocol menu. On the PX, select PROT C in your script file (if COMSTALL.BAS is used this is done automatically). Type: XMODEM S FILENAME.EXT <cr>. When CompuServe XMODEM acknowledges it is ready to download press the ESC key on the PX, and then at the '*' prompt type: INPUT FILE FILENAME.EXT <cr>. The downloading process should initiate and you should see the record numbers as the file is transferred. When the process is complete, return to the terminal mode on the PX by typing: TERM <cr>.

Disks for PF-10

The PF-10 supposedly requires double-sided, double-density three and half inch disks. However, single-sided double density disks (which are much more readily available and significantly cheaper than the double-sided ones) will also work. Unfortunately you will find that out of a box of ten single sided disks, only eight or nine will format (be usable). If you insist on having double-sided, double-density disks, try those manufactured by Hewlett Packard for their portable (I forget its name).

The following discussion of sending files between the Kaypro and the PX-8 was submitted by Jay Bond.

Sending Geneva Files to the Kaypro

This document describes how to send data and .COM files from the Geneva to the Kaypro. The procedure involves three steps: preparing the Kaypro to receive a file using the MITE program, sending a file from the Geneva to the Kaypro using the TERM program or the UNLOAD program, and then storing the transferred file on the Kaypro.

Baud rate, parity, and word size must be the same for both computers. Try setting both computers to 2400 baud, 8-bit word size and no parity. If these values do not work, see the MITE manual for more information. Use the CONFIG program to set the correct parameters on the Geneva. You also need to store the correct parameters in a separate file. The MITE program uses these parameters to set the Kaypro.

Connect the Geneva to the Kaypro using Epson printer cable #725. Then follow the steps below.

Setting Up the Kaypro to Receive Files

Use the MITE program to prepare the Kaypro to receive a file from the Geneva:

1. Load MITE on the Kaypro by typing:
   MITE <RETURN>
2. Load the file that contains the correct parameters by typing L for Load and then the filename. For example:
   PARAMS.EXT <RETURN>
3. Type D for Download.
4. Type C for Capture data.
5. At the next prompt, type the name of the file you are transferring. For example:
   REPORT.DOC <RETURN>
   If you will be using the UNLOAD program to send files from the Geneva, use the extension ".HEX" because the UNLOAD program sends files in the INTEL hex format only.
6. Type X to eXit to the main menu.
7. Type G for Go.

You can now send a file from the Geneva to the Kaypro, and the Kaypro will be ready to receive it.

Sending Files from the Geneva

You can use the TERM program to send data files to the Kaypro. x1Use the UNLOAD program if you want to transfer .COM files, as well as data files.

Using TERM

If you are using the TERM program, follow these steps:

1. Load TERM on the Geneva by typing:
   TERM <RETURN>
2. Next choose option 1, the normal mode.
3. Then press <PF3>.
4. Type the name of the file you are transferring. For example:
   REPORT.DOC <RETURN>
5. Press <RETURN> at each of the three prompts that follow. Your file is now being transferred to Kaypro.

Continued on following

Using UNLOAD

If you are using the UNLOAD program to send files to the Kaypro, do the following:

Load UNLOAD and then type the name of the file you are transferring. For example, type:
UNLOAD PROGRAM.COM
<RETURN>

You are now sending a file to the Kaypro.

Storing Received Files on the Kaypro

Next, you must store the transferred file on the Kaypro by following these steps:

1. To go to the main menu, hold down the <CTRL> key and type J.
2. Type D for Download.
3. Type W to Write the file to disk.
4. Use the LOAD program to reassemble files sent with the UNLOAD program.

We would like to encourage all users to send in tips to share with each other in this column.

Tape of the Month #4

Tape of the month #4 contains the following files:

UNLOAD.COM	- A Simple file transfer program that converts **ANY** file into HEX format and PIPed to another computer. Then use LOAD.COM to convert the file back to its original state.
UNLOAD.DOC	- Documentation file for UNLOAD.COM
LOAD.COM	- To use with UNLOAD.COM
MTINIT.COM	- This program performs the DIRINIT function found in the PX system menu. Use with care, for you can easily wipe out a tape. Very useful for tape copying when used in SUBMIT files.
MTREMOVE.COM	- This program does the REMOVE function of the PX system menu. Use with MTINIT in SUBMIT files for tape copying.
SWEEP.COM	- A Utility program that will correctly read file attributes on ALL drives (including H). Performs many file manipulations, including squeezing and unsqueezing files.
FINDBAD.COM	- A Utility program that locates and locks out bad disk sectors. PF-10 owners using single sided disks will find this very useful.
FINDBAD.DOC	- Documentation file for FINDBAD.COM

ORDERING INFORMATION: To order, please indicate the Tape number on your check for $10.00 and send to: The EpsonConnection, Tape Service Dept., P.O. Box 14027, Detroit MI 48214.

QUALITY SOFTWARE AT REASONABLE PRICES

CP/M Software by
Poor Person Software

Keyed Sequential Files **$39.95**
CP/M 2.2 Extension. Available to all languages with a BDOS interface. Variable length Records to 508 bytes, single key to 32 bytes, files to 256k bytes. Source for "C" language support library.

Poor Person's Menus **$29.95**
Interactive menu design and edit program with "C" language source for runtime support library. Package includes "C" source for an interactive Mailing List Manager using Poor Person's Menus and separately purchased Keyed Sequential Files (compatible with Mailing Label Printer). Write your own interactive data manager programs.

Poor Person's Spooler **$49.95**
All the function of a hardware print buffer at a fraction of the cost. Keyboard control. Spools and prints simultaneously.

Poor Person's Spelling Checker **$29.95**
Simple and fast! 33,000 word dictionary. Checks any CP/M text file.

Mailing Label Printer **$29.95**
Select and print labels in many formats.

Window System **$29.95**
Application control of independent virtual screens.

All products require 48k CP/M 2.2 and are available on 8" and 5" Northstar formats, other 5" formats add $5 handling charge. California residents include sales tax.

Poor Person Software
3721 Starr King Circle
Palo Alto, CA 94306
tel 415-493-3735
CP/M is a registered trademark of Digital Research

AT LAST! THE 'PERFECT MATE' FOR YOUR QX-10!

Custom Quality!

Made from beautiful Finnish laminated birch, the COMPUTER-MATE I console is just the answer for QX-10 or QX-16 lovers! **Reason 1:** Its special drop shelf lowers the keyboard to a comfortable 26" working height– judged to be the least tiring. **Reason 2:** A removable copyboard places your work directly in front of you, reducing neck and eye fatigue. **And . . .** it's a handsome, custom-made piece of furniture!

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Computer-Mate I, assembled form, lacquer finished . . .$139.50
plus $8 shipping. Calif. residents add 6.5% tax.

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LETS YOUR EPSON PLAY LIKE AN IBM™

At $595 retail (for the 192K version) the QX-PC II is a real bargain and it makes your QX-10 the most powerful dual processing machine in the world.

DESCRIPTION	ITEM #	LIST	YOUR COST
192K	QX-1	$ 595	**$499.99**
256K	QX-2	$ 670	**$570.00**
384K	QX-3	$ 895	**$761.00**
512K	QX-4	$1,045	**$888.00**

Prices include MS-Dos software and manual.

Auxiliary boards (to boost to ram of our existing QX-PC II board).

DESCRIPTION	ITEM #	LIST	YOUR COST
128K	AB-1	$249	**$229**
256K	AB-2	$399	**$369**

TITAN'S MS-DOS RAM DISK uses 180K of RAM on the QX-10's motherboard to simulate a disk.

DESCRIPTION	ITEM #	YOUR COST
RAM DISK	MS-D	**$40**

AMPLOT II / Q PLOTTER CAD PACKAGE

The Amplot II is a professional 6 pen automatic plotter that has a large 10" x 15" plot range. Q-Plotter by Metro Software is the most sophisticated C.A.D. program available for the QX-10 today. The list price for the package is $1549, but our price is only $900 total.

DESCRIPTION	ITEM #	LIST	YOUR PRICE
AMPLOT II & Q-PLOTTER PKG.	CAD+	$1549	$900

THE BLACK MAX
A Power Conditioner With a Remote Switch

The Black Max eliminates powerline pollution, local line interference and damaging thunderstorm surges which cause equipment damage. This quality power conditioner offers the maximum protection for your hardware and software investment at an economical cost. The BLACK MAX comes equipped with a remote control switch which enables you to place all power distribution wires out of sight and potentially dangerous areas.

FEATURES: Surge Suppression...E.M.I./R.F.I. Filtration...Easy wall mount bracket...Six outlets with line to line & line to ground protection...Snap in remote control switch comes complete with 6' cord...Fused protection.

ITEM #	LIST	YOUR COST
BM-1	$149.95	**$109**

!!NEW!!
DISCOVER THE POWER...DATA-RITER
EFFECTIVE...FAST...EASY TO USE...INEXPENSIVE

It's finally true that for a reasonable price you can have a powerful data base manager and application generator that will allow you to create customized, stand alone programs with no coding or programming knowledge.

Simply follow screen prompts written in plain English and easy to understand User's Manual (no computerese) to generate your own personalized mailing lists, accounting applications, checkbook programs, inventory programs, reports, etc. that really work. **DATA-RITER** does all the coding for you.

DATA-RITER created a standard mailing list program in 5 minutes. Other data base programs used by the same individual (a professional programmer) took from 30 minutes to 5 hours.

FEATURES: Built-in error trapping...Ad hoc edits of menu screens, Data entry screens and reports...Interactive filing...32,000 records (hardware dependent)...Maximum file size - 3,200,000 characters...32 fields per record...Field size - 80 characters maximum...Maximum number of key fields per file hardware dependent...Can be linked to Multi-Plan, WordStar, Perfect Writer, Perfect Calc...4 function math integral to each program...Customize data entry screens, menus & reports...Efficient sort routines.

You will find no comparison in speed, ease of use and value for your dollar.

ITEM #	YOUR COST
DT-R	**$99.95**

TURN YOUR QX-10 INTO AN EPSON PLUS!

Thousands of computer operators have already experienced the speed and power of the DOSPLUS IV disk operating system. Now, you can, too, while turning your own Epson computer into an EPSON*plus*! Because Micro-Systems Software has made DOSPLUS IV available for our Epson QX-10.

How can DOSPLUS IV give you that extra plus? With its user-friendly operation, unmatched speed and power, BASIC array sort, backup and format from "DO" file and more. Plus, DOSPLUS IV includes M-ZAL, the ultimate disk editor/macro-assembler, allowing you to combine the best disk operating system and the finest editor/assembler all in one program, turning your QX-10 into an Epson*plus*. For one surprisingly low price.

DESCRIPTION	ITEM #	YOUR PRICE
DOSPLUS IV	DP-4	**$169.95**

!!NEW!!
BUSINESS PAC 100

100 ready to run business programs that are great for small businesses that don't require extensive, sophisticated programs. Also useful for home finances and college business courses.

INCLUDES: 128 page Users Manual...Inventory Control...Payroll...Bookkeeping System...Stock Calculations...Checkbook Maintenance...Accounts Receivable...Accounts Payable...etc.

DESCRIPTION	ITEM #	YOUR PRICE
BUSINESS PAC 100	BP-1	**$149.95**

CASH REGISTER CONTROL

CASH REGISTER CONTROL IS AN AMAZINGLY VERSATILE RETAIL SALES AND INVENTORY CONTROL SYSTEM THAT HAS BEEN CAREFULLY DESIGNED FOR THE FIRST TIME COMPUTER USER. You can quickly and easily learn to use CASH REGISTER CONTROL's many features, because you learn them one step at a time.

FEATURES:
- Completely menu driven.
- Can be used with present cash register or to replace it completely.
- Can keep track of up to 4 independent cash drawers.
- Keeps track of cash, check, credit card and open account sales.
- Can store names, addresses, credit limits and balances for open account customers, and print statements.
- Includes an integrated inventory control system that keeps track of stock levels of all items in and out of stock, and automatically notifies you of low stock levels. Prints inventory reports and pricing labels with product descriptions and codes.
- Prints sales reports that provide an organized picture of your daily sales activity. Reports include transaction audit trail, daily sales by item, and daily sales by salesperson.
- And many more features included.

DESCRIPTION	ITEM #	YOUR PRICE
CASH REGISTER CONTROL	CRC-1	$250

THE MARKET PAC

THE MARKET PAC is a selected set of 37 separate programs designed to help both financial professionals and private investors in the analysis of positions and prospective positions in various securities.

The computer will guide you step-by-step through the operation. A complete user's manual is provided that gives complete full-page descriptions of each calculation and function.

FEATURES: Portfolio Valuation...Trend Analysis...Bond Calculations...Money Market Analysis...Portfolio Bookkeeping...Future Projections...And much more!!!

DESCRIPTION	ITEM #	YOUR PRICE
THE MARKET PAC	MRP-1	$99.95

SMALL BUSINESS MANAGEMENT SYSTEM

An integrated package that allows you to use your computer to manage a small business.

FEATURES: Order Entry, Prints Invoices, Complete General Ledger, Accounts Receivable, Inventory, Hard Disk compatible, and an Installation Package that tailors the programs to your business.

DESCRIPTION	ITEM #	YOUR PRICE
SMALL BUSINESS MANAGEMENT SYSTEM	SBS-1	$250

CHECKBOOK PLUS

CHECKBOOK PLUS is the only complete financial program that's simple enough for a beginner's household budget, yet powerful and flexible enough to help run a small business!

FEATURES: Prints Checks, Automatic Monthly Bill Payments, Tax Preparation Aid, Printouts include - Review of Checkbook, Outstanding Checks, Payee Listing, List of Transactions for Single Category or all Catagories, Payable Checks, Payroll Checks, Search Reports, uses on screen explanations at every step along the way, and more!!!

DESCRIPTION	ITEM #	YOUR PRICE
CHECKBOOK PLUS	CKP-1	$99.95

MAIL PAC II

MAIL PAC II is a powerful new mailing list system with a built-in word processor. And an on-screen "HELP" feature for beginners makes it easy for anyone to get started quickly and easily.

FEATURES: Hard Disk compatible, Can turn "HELP" feature off, Checks for duplicate entries, Form Letter Generator with Built-In Word Processor, Prints Labels, Sorts by Zip or Alphabetical order, Print selected groups of labels by searching for any user-defined code, and more!!!

DESCRIPTION	ITEM #	YOUR PRICE
MAIL PAC II	MP-2	$99.95

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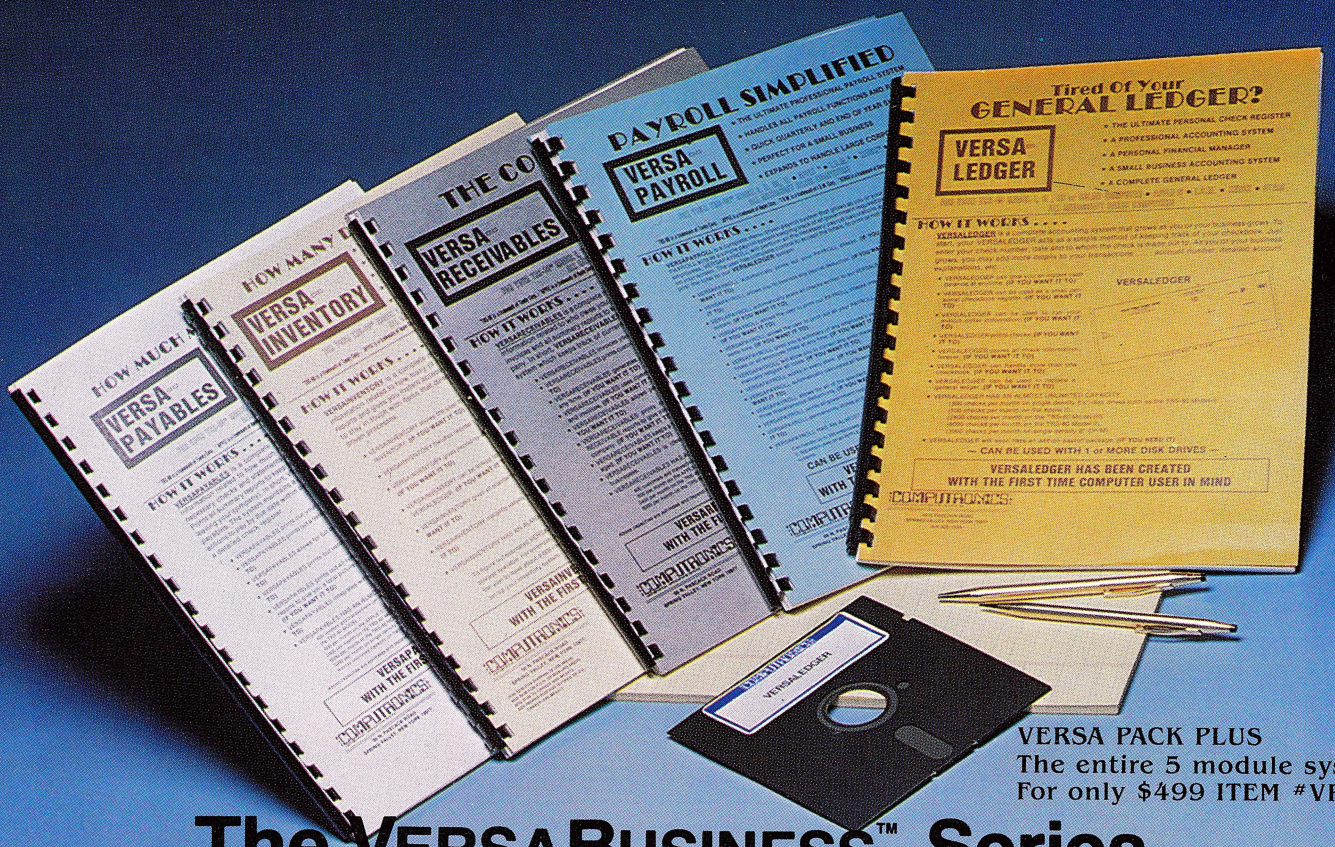

VERSA PACK PLUS
The entire 5 module system
For only $499 ITEM #VP+

The VERSABUSINESS™ Series

Each **VERSABUSINESS** module can be purchased and used independently, or can be linked in any combination to form a complete, coordinated business system.

VERSARECEIVABLES™ — $99.95 — ITEM #VR-1

VERSARECEIVABLES™ is a complete menu-driven accounts receivable, invoicing, and monthly statement-generating system. It keeps track of all information related to who owes you or your company money, and can provide automatic billing for past due accounts. VERSARECEIVABLES™ prints all necessary statements, invoices, and summary reports and can be linked with VERSALEDGER II™ and VERSAINVENTORY™.

VERSAPAYABLES™ — $99.95 — ITEM #VPA-1

VERSAPAYABLES™ is designed to keep track of current and aged payables, keeping you in touch with all information regarding how much money your company owes, and to whom. VERSAPAYABLES™ maintains a complete record on each vendor, prints checks, check registers, vouchers, transaction reports, aged payables reports, vendor reports, and more. With VERSAPAYABLES™, you can even let your computer automatically select which vouchers are to be paid.

VERSAPAYROLL™ — $99.95 — ITEM #VPY-1

VERSAPAYROLL™ is a powerful and sophisticated, but easy to use payroll system that keeps track of all government-required payroll information. Complete employee records are maintained, and all necessary payroll calculations are performed automatically, with totals displayed on screen for operator approval. A payroll can be run totally, automatically, or the operator can intervene to prevent a check from being printed, or to alter information on it. If desired, totals may be posted to the VERSALEDGER II™ system.

VERSAINVENTORY™ — $99.95 — ITEM #VI-1

VERSAINVENTORY™ is a complete inventory control system that gives you instant access to data on any item. VERSAINVENTORY™ keeps track of all information related to what items are in stock, out of stock, on backorder, etc., stores sales and pricing data, alerts you when an item falls below a preset reorder point, and allows you to enter and print invoices directly or to link with the VERSARECEIVABLES™ system. VERSAINVENTORY™ prints all needed inventory listings, reports of items below reorder point, inventory value reports, period and year-to-date sales reports, price lists, inventory checklists, etc.

VERSALEDGER II™ — $149.95 — ITEM #VL-1

VERSALEDGER II™ is a complete accounting system that grows as your business grows. VERSALEDGER II™ can be used as a simple personal checkbook register, expanded to a small business bookkeeping system or developed into a large corporate general ledger system **without any additional software.**

- VERSALEDGER II™ gives you almost unlimited storage capacity (300 to 10,000 entries per month, depending on the system),
- stores all check and general ledger information forever,
- prints tractor-feed checks,
- handles multiple checkbooks and general ledgers,
- prints 17 customized accounting reports including check registers, balance sheets, income statements, transaction reports, account listings, etc.

VERSALEDGER II™ comes with a professionally-written 160 page manual designed for first-time users. The VERSALEDGER II™ manual will help you become quickly familiar with VERSALEDGER II™, using complete sample data files supplied on diskette and more than 50 pages of sample printouts.

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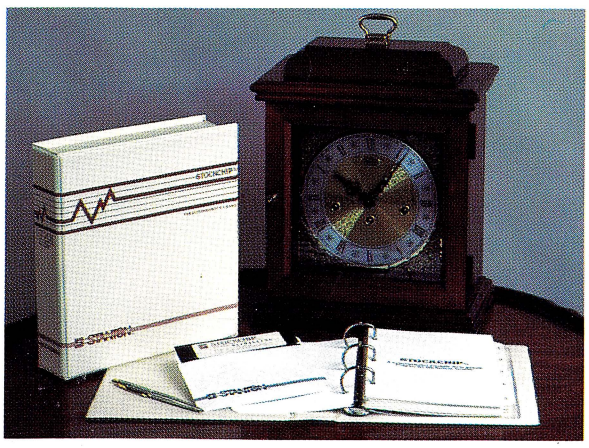

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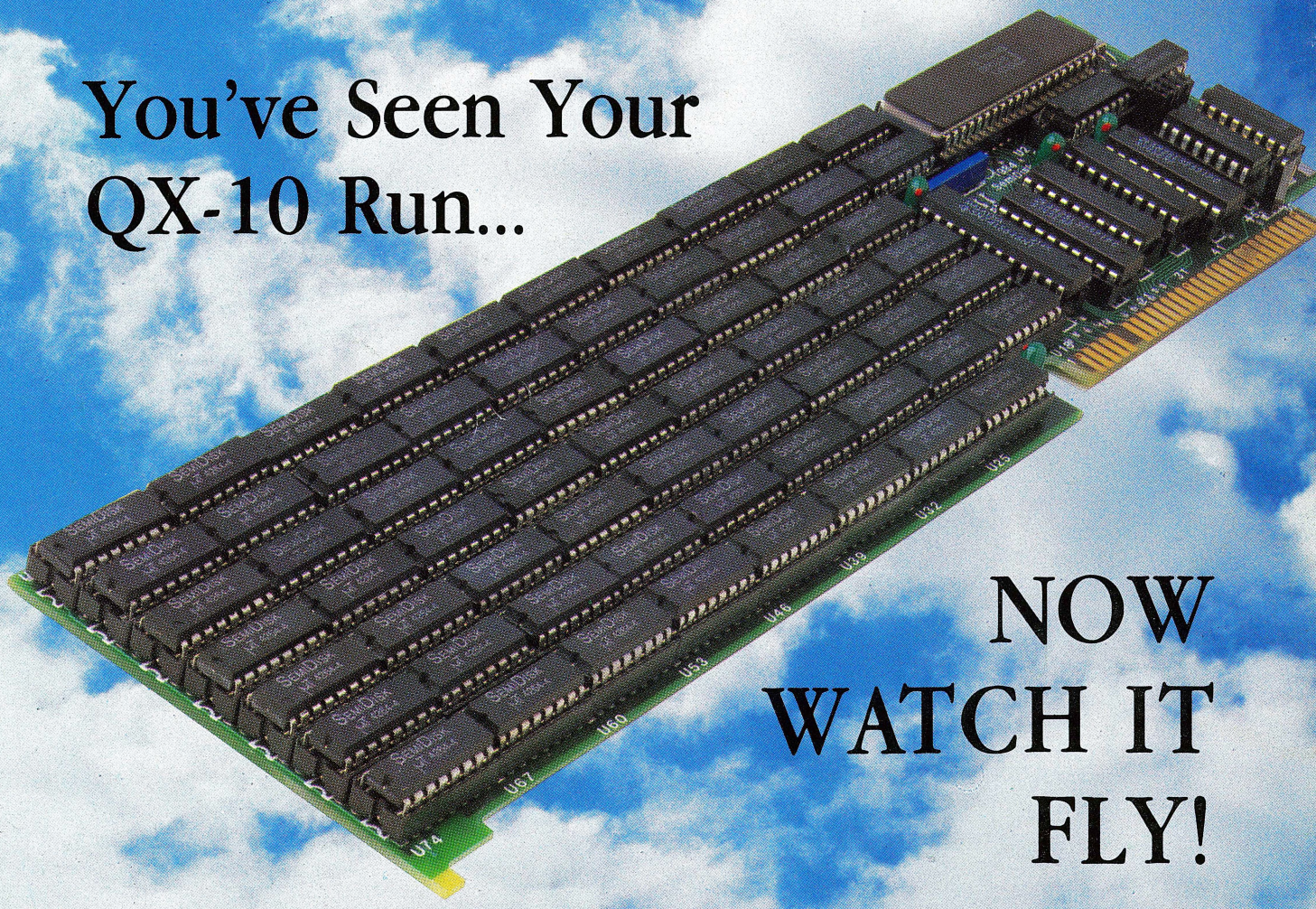

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